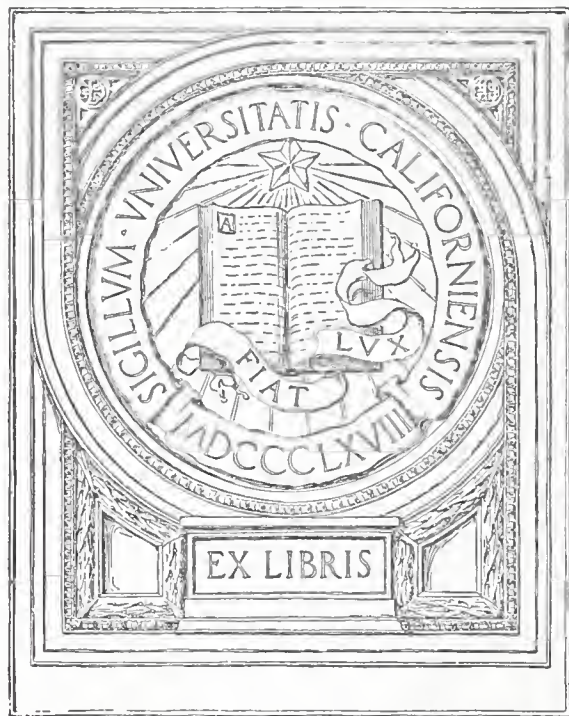



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Key to Abbreviations in This Index
Or.—Original Article.
C. R.—Case Report.
B. M.—Bedside Medicine.
E. C.—Editorial Comment.
C. N.—Clinical Notes.
L. M. H.—Lure of Medical History.

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THE FRIEDMAN TEST FOR PREGNANCY*

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AND

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Los Angeles

DISCUSSION by *Frederic M. Loomis, M.D., Oakland; Frank W. Lynch, M.D., San Francisco; H. A. Stephenson, M.D., San Francisco.*

THE purpose of this paper is to set forth in simple form the fundamental facts concerning the Aschheim-Zondek test for pregnancy, and its modification by Friedman. The use of the test in the diagnosis and treatment of hydatid mole and chorio-epithelioma will also be briefly reviewed. The Friedman test is so simple and practical in technique and interpretation that it is being used by an increasingly large number of workers, many of whom are not especially trained in laboratory procedure. We will consider the various limiting factors and sources of error with their relative importance to the dependability of the test.

DIFFICULTIES IN DIAGNOSIS OF PREGNANCY

The diagnosis of pregnancy has always been a source of great embarrassment to every practitioner of medicine. Errors are frequent and are not limited to the tyro in diagnosis. To attain great skill in pelvic diagnosis thousands of cases must be examined, but few men have access to the clinics affording this invaluable training. The differentiation between pelvic tumors and the pregnant uterus, the amenorrheas of endocrine origin, irregularities in menstruation, the menopause, and pregnancies occurring before the re-establishment of menstruation after delivery, are only a few of the problems that often leave the obstetrician or gynecologist in either the position of making a diagnosis with a sense of extreme apprehension, or refusing to commit himself, falling back on the watchful waiting policy which may be disastrous in certain instances to the health or reputation of the patient, and in certain others to the reputation of the physician. Patients do not like doubtful diagnoses.

It is no wonder, therefore, that the introduction of a laboratory test for pregnancy has always

found an interested audience. The history of the various laboratory methods for the diagnosis of pregnancy and their failure as practical procedures is not within the scope of this paper. We are interested in the Aschheim-Zondek test and its modification by Friedman.

STUDIES BY ZONDEK, ASCHHEIM AND OTHERS

Zondek and Aschheim began a series of studies in 1925 which demonstrated the presence of the hormone of the anterior lobe of the pituitary body in the urine of pregnant women, and the fact that such urine when injected into sexually immature mice caused ovulation in the ovaries in about one hundred hours. This was one of the most important discoveries in recent endocrine investigation. Zondek¹ was able to state that "the anterior lobe of the pituitary and no other tissue of the body produces the hormone which sets in action the latent ovarian function, and thereby brings the infantile animal to sexual maturity." Evans² reported similar findings independently. Smith³ reported that the anterior lobe hormone is a non-specific sex hormone; that is, it acts upon the male or female generative organs, bringing about development in either case. It was further demonstrated by Aschheim and Zondek that the ovarian hormone, not the pituitary, when injected into immature animals does not produce any change in the ovaries but apparently only in the uterus and vagina. The conclusion, therefore, is that the anterior lobe hormone brings the ovarian or follicular apparatus into action, fires off the follicular ripening and mobilizes the secondary ovarian hormone in the follicular cells. The ovarian or follicular hormone then acts in a specific way on the uterus and vagina.

The first attempt to develop a biologic test for pregnancy based on the above work was the demonstration of the ovarian hormone in small quantities of urine; but after considerable effort it was concluded that this method was not suitable because the hormone cannot be demonstrated in one to two cubic centimeters of urine earlier than the eighth to tenth week of pregnancy, and then not always with certainty. Moreover, the ovarian hormone may occasionally be excreted in large quantities in nonpregnant women, particularly those with functional disturbances such as the menopause, certain amenorrheas, hyperthyroidism, and myxedema.

* Read before the Obstetrics and Gynecology Section of the California Medical Association at the sixty-first annual session, Pasadena, May 2-5, 1932.

The blood of the pregnant woman shows a marked increase of both the pituitary and ovarian hormone. With the onset of pregnancy the rise of the ovarian hormone is gradual over a period of weeks. In contrast, the pituitary hormone rises rather acutely, a high level being reached a few days after conception. This remains high until the eighth month of pregnancy after which it gradually drops, reaching a normal level about the eighth day after delivery. This abrupt increase of the pituitary hormone, coupled with the fact that it reaches demonstrable amounts in the urine only in the presence of pregnancy, with two exceptions, hydatid mole and chorio-epithelioma, makes it the ideal hormone the determination of which makes possible an early and accurate diagnosis of pregnancy.

Let us summarize these important facts:

1. The hormone of the anterior lobe of the pituitary acts as the activating substance producing ovulation in the ovary.

2. The anterior lobe hormone reaches a high level in the blood, and is excreted in demonstrable quantities in the urine a few days following conception, the exact time as yet not having been determined.

3. The anterior lobe hormone is never excreted in the urine in demonstrable quantities in conditions other than pregnancy, hydatid mole, and chorio-epithelioma.

4. The ovarian hormone, not the pituitary, prepares the uterus for pregnancy, *i. e.*, produces hypertrophy and vascularization.

5. The ovarian hormone is excreted in the urine at a later period following conception, probably six to eight weeks.

6. It is present in the urine in demonstrable quantities in many other conditions, these conditions in several instances being the most important ones in which differential diagnosis of pregnancy occurs.

ASCHHEIM-ZONDEK TEST

The development of a practical method for determining the presence of the anterior lobe hormone was logically the next step, and the Aschheim-Zondek test was the result. A detailed account of the Aschheim-Zondek reaction will not be given. Suffice it to say that a positive Aschheim-Zondek test for pregnancy is based on the development of hemorrhagic follicles and corpora lutea in the ovaries of immature mice one hundred hours after the first of a series of six subcutaneous injections of urine.

The test has been used in almost every large clinic and by private laboratories all over the world. The statistics cover thousands of cases⁴ and there is an almost universally recorded percentage of accuracy of from 98 to 99 per cent. The sole variations from these uniformly excellent results, in the literature reviewed, are the reports of Mazer and Hoffman,⁵ White and Severance,⁶ and Bland, First and Roeder,²¹ reviewed later in this paper.

The Aschheim-Zondek test with mice, admirable though it is, has certain disadvantages. To use the test routinely it is necessary to be in a position to command a steady and dependable supply of immature mice of a definite age and weight. This means the maintenance of a large breeding colony of mice, numbering perhaps 5,000 to 10,000 animals, for, unless the demand for a given maturity of mouse be invariable, there is a constant loss from overmaturity. Mice are very susceptible to toxic substances in the urine, and the mortality is high. The interpretation of the results requires a magnifying glass for the examination of the ovaries and often requires serial sections. The test requires four to five days for completion although certain modifications involving the concentration of the urine have been proposed which may shorten the time factor considerably. The latter are still laboratory procedures not practical for the average worker.

FRIEDMAN'S MODIFICATION

To obviate these difficulties Friedman⁷ proposed a modification of the Aschheim-Zondek test based on the fundamental facts that:

- "1. The ovaries of an isolated immature female rabbit contain neither corpora lutea nor corpora hemorrhagica, as the rabbit does not ovulate spontaneously but only after coitus.

- "2. The urine of a pregnant woman contains some substance or substances which simulate in their biologic effects the anterior hormone of the pituitary.

- "3. The ovary of the rabbit quickly responds to the injection of these substances by the formation of corpora lutea and corpora hemorrhagica."

Friedman's technique as quoted from his article⁷ is as follows: "The materials and equipment necessary for the performance of the proposed test are: (a) an ordinary bed-pan specimen of urine, (b) a five cubic centimeter syringe, and (c) an unmated mature female rabbit. The urine is injected intravenously thrice daily for two days in four cubic centimeter doses. Forty-eight hours after the first injection the rabbit is killed. If the ovaries contain either corpora lutea or large bulging corpora hemorrhagica, the reaction is positive and the patient who furnished the sample is presumably pregnant. If the ovaries contain neither corpora lutea nor corpora hemorrhagica but only clear unruptured follicles, regardless of their size, the reaction is negative."

LATER MODIFICATIONS

The original technique of Friedman has been modified in various ways: (1) Variations in the dose of urine. (2) Single as opposed to multiple injections. (3) Various attitudes toward the care of the urine sample with reference to the maintenance of its potency. (4) Suitable age of the rabbits and the care of the animals, particularly as to isolation, and selection of dependable stock. (5) Autopsy as opposed to exploratory laparotomy. (6) The time factor between the first injection of urine and the final examination of the ovaries. (7) The interpretation of the result.

DOSAGE OF URINE

Friedman and Lapham used four cubic centimeters of urine injected thrice daily for two days, a total of twenty-four cubic centimeters. They are the only workers reporting three cases of toxic urine which repeatedly killed the animals. This large and repeated intravenous dosage may have been responsible, for in no other series was such a large dosage used. Dosage by other workers varies from a five cubic centimeter single dose used by Wilson and Corner⁸ to fifteen cubic centimeters used by MaGath and Randall⁹ in one injection; Reinhart and Scott¹⁰ at times also used fifteen cubic centimeters. The average dose seems to be seven to ten cubic centimeters in a single injection. The ten per cent error in a series by White and Severance⁶ is partly attributed to the single dosage method. Friedman, in a discussion of this series, so places the blame and calls attention to the quantitative factor present.⁶ "If one titrate the amount of this effective substance in the urine, he will find that in a seven months' pregnancy as little as one-sixteenth cubic centimeter of urine injected into a suitable rabbit in heat will give a positive response. If, however, one uses an adult animal, but an animal that is not in heat, many times that quantity will be necessary. In order to get an effective response of the urine of pregnancy with a minimal quantity, one must use a rabbit that is known to be in heat. One cannot tell from an external examination whether an animal is in heat." Therefore it is probably true that small amounts of urine if injected into one rabbit might give a positive, and into another, not in heat but apparently the same age and weight, might give a negative. For this reason Friedman uses large repeated doses. Reinhart and Scott¹⁰ inject five cubic centimeters and do an exploratory laparotomy at twenty-four hours. If the test is negative they close the animal and inject a second dose of five cubic centimeters and kill the rabbit at forty-eight hours. The twenty-four-hour reading is rarely changed. A morning specimen of urine is desirable because of the concentration of the hormone. The greater dilution of specimens taken during the day might be the source of a false negative reaction.

THE STABILITY OF THE HORMONE

The stability of the hormone is a factor about which no specific data are recorded in the literature to our knowledge. It seems a simple question to clear up, but the cost of animals is rather high, and it is not surprising that the number necessary for this research has apparently not been available. Opinions regarding stability vary in the literature. Friedman says that if the material is handled properly (*i. e.*, kept on ice), the potency of the active sample will not be materially impaired at the end of six days.⁷ MaGath and Randall⁹ recommend that the urine be used within an hour of voiding, or if this is not practical it should be placed on ice, and urine older than five hours should not be used. Wilson and Corner,⁸ who have done one of the most thorough and

painstaking pieces of work in this field, store the urine on ice, and state positively that it remains active for months. We have no well-founded opinion on this subject. We make it a rule to place the urine on ice as soon as possible after it is voided, and inject the rabbit within three to four hours. One false negative in our series occurred when circumstances caused one of us to carry the sample for six hours on an extremely hot day. An additional factor in this instance, however, was an underweight, stunted fourteen weeks old rabbit, rendered so by a deficiency diet consisting solely of barley. It is apparent that no absolute statement on this important point can be made until specific research has established the facts. Dr. G. D. Maner of the Brem, Zeiler, Hammack and Maner Laboratories has done several hundred Friedman tests, and from his experience with specimens mailed to the laboratory, believes that there is little loss of potency over a period of some weeks.

SELECTION AND CARE OF THE ANIMALS

The rabbit does not as a rule copulate or go into heat until the age of five months during the summer, and six to eight months during the winter.¹¹ Therefore a rabbit of ten weeks is only half-grown, and one of twelve to fourteen weeks is still six weeks from maturity even in the summer months. The use of an immature animal, therefore, involves a certain period of time following the injection during which the ovary is being brought to maturity, following which, ovulation, the typical reaction of the test, occurs. Rabbits ten weeks old or less are definitely unsuitable for the Friedman test. Gladys Dodds,¹² in her first twenty cases, used rabbits less than twelve weeks old with 30 per cent failure. Her second group of thirty-three cases, using rabbits twelve to twenty weeks old, gave 100 per cent correct results. Schneider's¹³ false negative occurred when for the first time six weeks old rabbits were used. Subsequent tests with twelve weeks old rabbits gave a correctly positive result. This fairly well establishes the fact that rabbits under twelve weeks old are not reliable and are apt to give false negatives. Rabbits at twelve weeks weigh four to five pounds.

Isolation Period.—An isolation period of at least three weeks for does who have been exposed to males is necessary to avoid false positives, for although pregnancy may not occur, the stimulation of attempted coitus may cause ovulation. At the end of three weeks, palpation will determine the presence or absence of pregnancy. Pseudo reactions may even occur from hopping of one doe by another. Therefore individual isolation of each doe is important.

METHOD OF EXAMINATION

Reinhart and Scott do an exploratory laparotomy at twenty-four hours, and if the test is positive they close the animal for future use; if negative, they close and reinject five cubic centimeters and reexamine at forty-eight hours. They rarely find a positive at the second examination. Fried-

man kills his rabbits, as do the majority of workers; for although this method is less economical it does not involve the outlay of time and trouble necessary for laparotomy. Rabbits eight weeks old cost seventy-five cents to one dollar, and does twelve weeks old cost \$1.75 to \$2, from reliable uniform stock. A rabbit is ordinarily marketed at about ten weeks, and if saved longer represents a loss to the breeder.

THE TIME FACTOR

The period of time between the first injection of urine and examination of the ovaries varies in different laboratories from sixteen to forty-eight hours. Friedman used a forty-eight-hour period. MaGath and Randall use thirty hours, Schneider twenty-four to thirty hours, White and Severance forty-eight hours. The average and most universally used period is twenty-four to thirty hours. However, the errors in this test, with a few exceptions, are false negatives, and the several reported instances of negatives at twenty-four hours being positive at forty-eight hours indicate that perhaps the percentage of error could be still further reduced by always waiting forty-eight hours for the final reading. For example, Davis and Walker¹⁴ opened a rabbit at twenty hours instead of the usual thirty hours and the reaction was negative. The rabbit died during the night, and on reexamination in the morning was positive. Using mature does one investigator¹⁵ opens the rabbit and sketches the ovary. The rabbit is then injected and reoperated upon eighteen to twenty-four hours later. In this way he can interpret actual changes in the ovary which have occurred as a result of the injection. He made hourly observations of the genitalia for a period of twenty-four hours. Hyperemia of the ovaries, tubes, and uterus occurred in three hours. A slight elevation of follicles occurred at the same time. This progressed until at the end of ten hours the picture of a positive test was present. Marked distention and coiling of the uterus appeared at six to seven hours.

Wilson and Corner⁸ in using the sixteen to twenty-hour period with a low percentage of error always used fully matured rabbits, thus eliminating the time mentioned above during which the immature ovary is being brought to maturity by the hormone. Schneider¹³ suggests that if there is a real necessity for rapid reading of the test, two rabbits may be injected, the first killed at twelve to sixteen hours, and, if positive, the second, of course, need not be sacrificed at the later period. This is a good idea. Urine concentration tests are being developed, and will probably soon be practical for use by the average worker, thus shortening the test safely.

INTERPRETATION OF THE TEST

In reading the test on immature virgin rabbits the specimens exhibited will show a striking difference between a negative and a positive. There is not available a description of a false positive caused by the sexual excitement created by

females placed together. Occasionally small rosy spots appear in large clear follicles. These are suggestive, but not positive. Probably these should be retested in cases of very early pregnancy. When mature rabbits are used repeatedly the picture is more confusing. Undoubtedly the use of virgin rabbits is the safest and most practical for the beginner.

The Friedman test has a dependability of about 98 per cent in a majority of reported series, 100 per cent in a few instances, and in two series only 73 per cent and 90 per cent. What are the factors that make for error?

FALSE POSITIVES

A hydatid mole or chorio-epithelioma will give a positive reaction which quantitatively may be ten to fifty times as strong as that given by pregnancy. The reaction persists as long as any of the live tissue of either growth remains in contact with the maternal circulation. False positives from other sources are rare, and when carefully studied are usually accounted for by breaks in the technique of rabbit isolation or by mixed urine specimens. What may be called a false positive occurs in the case of incomplete abortion with retention of live placental tissue in contact with the maternal circulation. Bland, First, and Roeder²¹ in their series reported 6.8 per cent false positives. "Especially," they say, "is this error likely to be encountered in women who are functionally sterile due to endocrine disturbances, or in women approaching the menopause. In these women a compensatory hypertrophy of the anterior hypophysis may produce an excessive quantity of hormone, which, finding its way into the urine, will render an incorrect positive." Pituitary hypertrophy following castration in the human being was noted by Tandler and Grosz, evidently an attempt to stimulate a poorly functioning ovary. Experimentally, Evans and Engle have shown that the hypophysis of gonadectomized animals possesses an activity five times greater than in the normal animal. This phase of the question of false positives is discussed in but one paper, a recent contribution. How important a factor of error it may be, apparently depends upon observations of future workers.

False Negatives.—False negatives are more frequent, and may be accounted for by the use of rabbits less than twelve weeks old or rabbits of uncertain or poor stock, insufficient dosage of urine, insufficient time between the first injection and final reading of the reaction. Missed abortions and ectopics may give negative reactions if the fetus is dead, and no live placental cells are in contact with the maternal circulation. It may be well to make an observation here regarding the collection of the specimen. Patients do queer things. We have all seen attempts at concealing pregnancy by patients who hope for operative procedures that may abort them. No report on a urine specimen should state that a certain patient is pregnant or not pregnant unless a responsible person has secured the specimen by catheterization.

SOME PERCENTAGE COMPARISONS

Considering the 10 per cent error in the series of White and Severance⁶ it is well to note that they had a like variation from the experience of other reliable men in the use of the Aschheim-Zondek test. They had one false negative on a patient thirty-two days past her period with no explanation to offer. The other errors were two negatives on ectopic pregnancies. No comment was made on the condition of the fetus or placental tissue at operation. They had one negative incomplete abortion with no laboratory work on placental tissue secured at time of curettement, if curettement was done.

Brouha¹⁶ did two hundred cases with 100 per cent results; Gladys Dodds¹² did twenty cases with six false negatives, an error of 30 per cent, using rabbits of one kilo and less than twelve weeks old. She followed this with a series of thirty-three cases, using rabbits twelve to twenty weeks old, with 100 per cent accuracy. She also changed the time factor from twenty-four to forty-eight hours on the second series.

Wilson and Corner⁸ report:

Sixteen patients tested during the puerperium, all negative within twenty-four to seventy-two hours. In only two was the reaction positive longer than forty-eight hours, probably from retained placental tissue.

Eighteen patients in the first month of pregnancy from the menstrual history and development of the uterus, none more than thirteen days over her period, and three not more than eight days, all positive, and correctly so.

Thirty patients, four to eight weeks pregnant, all positive.

Three patients, ten to thirteen days past their periods, negative at the first examination, but four to seven days later became positive.

One patient (the earliest known) menstruated July 4, 1930. She was operated upon for a large myomatous uterus. No suggestion of pregnancy from history or physical examination. Hysterectomy was done July 24, 1930, and upon opening the uterus a three weeks' ovum was discovered. A specimen of urine was obtained eight hours after operation and gave a positive reaction.

Concerning twenty-five abortions, Wilson and Corner report:

Four, two to three months, threatened abortions were positive.

Nineteen incomplete abortions: Of these, ten were positive, nine negative. All giving a positive reaction showed placental tissue still attached to the uterine wall when curetted, and microscopic examination showed it to be living tissue. All negatives showed only decidua or dead inactive placental tissue.

Two missed abortions gave positive tests early, and negative later. No fetal cells.

Two cases of women at term, each with a macerated fetus dead one month or over. Both were positive. As is usual in these cases, the placentas were not macerated, and living placental tissue was present.

Six cases of ectopic pregnancy with three positive, being acute cases with living tissue, and three negative having had symptoms of longer duration and no living tissue.

This report of Wilson and Corner, a remarkably thorough study, is the type of work that will advance our knowledge of the reaction.

Schneider used fifty test cases. Twenty were positive and confirmed, and thirty were negative.

Two negatives were later positive. Six weeks' rabbits were used for the first time on these two cases. Using twelve weeks' rabbits they were positive in twenty-four hours.

Dorn, Morse, and Sugarman,¹⁷ in San Francisco, did 150 cases, and had three false negatives, using the twenty-four-hour technique. Two were subsequently positive, and one aborted before re-testing. This gives them an error of 2.5 per cent. A forty-eight-hour technique might have reduced this to zero.

Davis and Walker¹⁴ report one false negative at twenty-four hours, positive at forty-eight hours, and two false positives. These two tests were among the first done, and both rabbits were injected on the day they were brought to the laboratory, a bad break in technique.

In MaGath's and Randall's series of eighty-five cases, thirty-eight pregnancies were all positive, and forty-seven not pregnant were negative with one exception, another instance of a false positive. In this case there was a record of placing a young male in the same hutch with the doe used in the test.

Reinhart and Scott¹⁰ had two failures in 150 cases. One false negative was operated upon, and two days after operation was positive. There was a very strong probability of a wrong source of the specimen used. The second failure was negative at twenty-four hours, but the clinical findings were so suspicious that a second rabbit was used, and forty-eight hours later gave a positive.

REPORT ON SERIES OF AUTHORS' CASES

We hesitate to report our series of thirty-five cases. The number is small, and insufficient time has elapsed for an accurate check-up.

REPORT OF CASE

The first case was interpreted without our ever having seen a positive, and we regret to admit that we called it positive. A few days later we realized our error, and repeated the test, which was again negative. The patient, a former nurse, felt sure she was pregnant, and would never have consented to interference at that time. Not having gained confidence in the test, and because the uterus proceeded to enlarge at a rate consistent with pregnancy, the patient was watched for two months. No fetal heart sounds developed. At operation a malignant tumor of the left ovary, superimposed over the uterus in the midline, was removed. Two false negatives in very early pregnancy occurred. The first, because of clinical symptoms, was rechecked two days later with the same single injection twenty-four-hour technique, and was positive. This was the instance in which the specimen was carried for six hours on a hot day, the rabbit used being one stunted in growth by a deficiency diet of cereal only. The second false negative was done three days after the patient had missed her period. It was repeated in two days, but was apparently repeated too soon, for the second reaction was also negative. The ovaries, however, in both instances showed clear large follicles. Friedman specifically calls these negative. Another worker recommends that the presence of these large follicles be an indication for repeating the test with an interval of five to seven days. During the succeeding ten days the patient was treated as an endocrine case, receiving antuitrin and theelin. Pelvic examination then showed uterine enlargement, and softening, and a third test using two injections of urine and a forty-eight-hour period gave a strongly positive result.

The patient at once left us for an abortionist, and was curetted. Of course no laboratory record is obtainable as to the presence or absence of pregnancy. As to the possibility of producing a false positive by the artificial introduction of the pituitary hormone, it is recorded in the literature that the transfusion of a patient with the blood of a pregnant donor will cause the recipient's urine to give a positive Friedman. Whether or not this patient was an instance of the artificial introduction of the hormone or was really pregnant we will never know. The case is reported to show the difficulty involved in obtaining reliable data.

HYDATID MOLE AND CHORIO-EPITHELIOMA

Only casual mention was made above of an extremely important function of the Friedman reaction, namely, its use in the diagnosis and prognosis of hydatidiform mole and chorio-epithelioma.

The urine of patients with hydatid mole or chorio-epithelioma gives a very strongly positive reaction. This excessive quantity of hormone was first noted by Zondek in April, 1929, and independently by Ehrhardt in November, 1929. In the case of a hydatid mole Ehrhardt found that one cubic centimeter of urine diluted 520 times gave a positive pregnancy reaction by the Aschheim-Zondek test, while a similar result was obtained in another case with one cubic centimeter of urine diluted 260 times. As the quantity of hormone in a liter of normal pregnancy urine is 10,000 mouse units, this means that in these two cases the hormone present was fifty-two and twenty-six times the normal, respectively. Therefore the quantitative determination of the anterior pituitary hormone in the urine may become of great importance in differentiating mole from pregnancy. This determination is probably best done by the Aschheim-Zondek test, using mice, as we have not yet determined a rabbit unit. Chorio-epithelioma gives a similar striking quantitative reaction.

After the expulsion of a hydatid mole the test may be used to check the subsequent clinical course. "The reaction may remain positive after hydatid mole as long as two months without evidence of chorio-epithelioma."¹⁸ Theoretically, once the reaction becomes negative after expulsion of the mole it should not again become positive. However, such a case is reported by F. J. Browne in October, 1931,¹⁹ and by Ehrhardt in 1930.²⁰ Repeated positive tests after the expulsion of the mole should, of course, be cause for keeping the patient under close observation for further evidence of developing chorio-epithelioma. Following the actual removal of a malignant chorio-epithelioma a continued positive reaction is evidence of metastasis, and reason for a grave prognosis.

CONCLUSIONS

The Friedman test has a high degree of accuracy of about 98 per cent which parallels that of the Aschheim-Zondek test, and exceeds that of other well-established laboratory tests such as the Wassermann reaction. This one to two per cent

of error may be still further reduced by the application of a more standardized technique developed by longer experience with the test.

It is as yet uncertain as to exactly how soon after conception the reaction becomes positive, probably not under three weeks. Early pregnancies, if negative, should be checked a second time seven to ten days later.

No positive data are available concerning the duration of urine potency, but the hormone is now considered far more stable than earlier workers thought.

The test determines the presence of live placental tissue or tissue of placental origin in contact with the maternal circulation. It may, therefore, give false negatives in the presence of missed abortions, incomplete abortions, or ectopic pregnancies with dead fetal tissue. The reaction might be positive in the case of a macerated fetus as the placenta in these cases frequently contains live tissue.

The test is strongly positive in the presence of hydatid mole and chorio-epithelioma, and quantitative Aschheim-Zondek tests become an important aid in the diagnosis, treatment, and prognosis of these important conditions.

Attention has recently been called to the fact that primary ovarian failure or castration of the human being may cause a compensatory anterior lobe hypertrophy which may throw an excess of anterior lobe hormone into the circulation, thus accounting for a certain number of false positive reactions.

The technique that we suggest is the use of a fresh specimen of urine, with two injections of seven cubic centimeters each on successive days, using a carefully controlled rabbit not under twelve weeks of age, killing the animal at forty-eight hours. If greater speed is needed, two rabbits should be injected, as suggested by Schneider, one killed early, and, if negative, the second at forty-eight hours. Great care should be exercised to avoid injecting the wrong specimen of urine. This might be important legally. A catheterized specimen procured by a responsible individual is desirable.

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DISCUSSION

FREDERIC M. LOOMIS, M. D. (350 Twenty-ninth Street, Oakland).—Hardly a day passes when we are not called upon for the diagnosis of pregnancy too early for anyone to be certain. Doctor McNeile touched a tender spot when he said patients do not like doubtful diagnoses. I have discovered the same thing, especially since times have been so difficult. We have all probably had the same experience lately in seeing patients who would ordinarily welcome their babies go to the abortionists, feeling that they cannot possibly go ahead, and accepting this unhappy way out of their difficulty with fear and bitter resentment. When early diagnosis is so insistently urged, we can often suspect the reason.

We use the Friedman test constantly, done for us by Dr. Gertrude Moore, and have come to place practically complete reliance upon it. We have had no errors in many months. So far as I can remember we have had but two errors in all, a false negative early in the development of the test and a false positive after several injections of theelin. At the present time Doctor Moore is using carefully isolated rabbits, separated from other females also, from three and one-half to five months old. These are injected with four cubic centimeters of urine three times on both the first and second days at three-hour intervals, and the animal is killed at about forty-eight hours. The positives and negatives are easily identified in practically every instance, the tedious sectioning often required in mice being unnecessary.

I hope that the quantitative test for the early recognition of hydatid may soon become reasonably certain. We all have patients in whom we suspect hydatids

and regret the wasted time when the diagnosis finally becomes clear; and at the same time we are sorely tempted at times to terminate suspected hydatids which finally prove to be normal pregnancies with a slight placental separation. We expect to follow our hydatids in the future with this test from time to time, though with a fairly long list of hydatids we have had no malignancy develop in the past fifteen years. Doctor Moore recently had a urine specimen produced two days after a hydatid was passed. This produced a clear positive, undiluted, and a clear negative when diluted ten times. In another patient the test was clearly positive, undiluted, after two weeks; this will be retested after another two weeks and if still positive it will be necessary to consider a strong possibility of malignancy.



FRANK W. LYNCH, M. D. (University of California Hospital, San Francisco).—The essayists have presented in a very clear and convincing manner their brief for the Friedman test for pregnancy. There is no doubt of the value of the method. Refinements in technique have made it an accurate means of diagnosis not only of early normal pregnancies, but for differentiating other confusing conditions from them. Moreover, the animal is a nice animal with which to work. No one in their right mind would prefer to handle rats or mice were rabbits available and suitable for the work. Moreover, as the essayist clearly shows, the availability of rabbits that are properly isolated makes it unnecessary to keep on hand the perfect swarm of rats or mice in the laboratory which one must do if he plans to have at all times animals of proper age for the Aschheim-Zondek test.

In my clinic we use for the pregnancy test rabbits, mice or rats, and in uncertain cases may use all three. While there are very few errors in diagnosis by this means, there are some even though the test is accurate in more than 99 per cent of cases. From our present standpoint of knowledge, we may be justified in believing that some of the failures accredited in the past to the fault of the method may more properly be laid to the use by technicians of animals of improper age. The difference of even two or three days in age in a rat or mouse may cause an error in obtaining a proper Aschheim-Zondek reaction if the animals are used at the earliest or latest accepted age period for the test. Concentration methods of preparing the urinary specimen speed up the interval of time before a test can be made.

Equally important is the selection of rabbits of proper age for the test. Wilson and Corner in their most excellent study obtained their astonishing results with the use of mature rabbits that were properly isolated. The ovaries of two or two and a half months old rabbits may be too immature to respond to the stimulation of the hormones contained in the urine of pregnant women. In this connection it is of interest that Dorn and Sugarman, when working out their test for the determination of the sex in the unborn, found that a rabbit whose testicles were still in the abdominal cavity was too undeveloped to respond to the hormones in the urine of a woman carrying an unborn female child, whereas those with testicles in the process of descent and still within the inguinal canal did so respond.

The ages when rabbits go into heat, *i. e.*, give evidence of maturity, varies in different parts of the country under the influence of their breed, size, food, and climatic conditions. They are said to mature at four and a half months in the summer and in five months in the winter in the East, yet it is a fact that they mature at least two weeks earlier in this section of California. We also find that rabbits bred in the San Joaquin valley go into heat earlier than those bred in the coast counties near San Francisco.

The essayists stress the great value of the Friedman and Aschheim-Zondek test as a means of differential diagnosis when trophoblastic tissue is supposed to be present. Our observations confirm this statement.

We have used the test in several cases of hydatidiform mole, beginning shortly after Aschheim, in March, 1930, calling attention to the fact that the urine of patients with such complications gave a very much stronger Aschheim-Zondek reaction than did that from women with normal pregnancies. We have had several cases which corroborated this statement. Yet the clinician should remember that although the test usually becomes negative a comparatively short time after the extrusion of the mole, it may remain positive as long as two months thereafter without the presence of chorio-epithelioma. In one of our cases the reaction was negative nine days after the mole was removed from the uterus. Eberhardt, however, found it was positive with undiluted urine for thirty-six days in one of his patients, and in forty-two days in another. In November, 1930, the test proved consoling to us when treating a patient with hydatidiform mole who bled considerably for one month after removal of the tumor. Immediately after the operation the test was positive for mice with one-eighth of one cubic centimeters of urine in three days (Aschheim-Zondek technique) as opposed to the normal pregnancy reaction then obtained with one cubic centimeters of urine in four days. A month later we found two large ovarian cysts (lutein) in the abdomen that were not present at the time when we removed the tumor. Since the patient was bleeding, we curetted without finding syncytial elements, yet because she was forty years of age and had had several children, to be on the safe side we inserted a small dose of radium to spray completely the uterine cavity. Ten days later the Aschheim-Zondek test was negative both for mice and with the concentrated method for rats. In the light of present knowledge, we would not use radium in treating such a patient today.

Quite recently there has been in one of the University Medical School Hospital services a most perplexing case. In March the patient was delivered of a mole. Two weeks later the Friedman test for pregnancy was positive, using ten cubic centimeters of undiluted urine, and then on May 2, May 16, and on August 27 it was still positive, even when using ten cubic centimeters of urine diluted 1:50 and 1:100 times. This long continuation of a very strong pregnancy reaction, together with some bleeding, seemed to indicate the presence of a chorio-epithelioma. The woman consequently was curetted without such findings. Feeling that this reaction, continued for more than four months, demanded more careful investigation, the abdomen was opened without finding evidence of tumor. Two weeks, and three weeks thereafter the reaction was negative, using ten cubic centimeters of 1:100 solution of urine. While there is always the possibility that the curette may fail to give the diagnosis, even though the tumor may be present, as in the case reported by Browne, the negative Aschheim-Zondek reaction indicates that at present there is neither trophoblastic tissue nor tumor. At any rate, the woman seems well and is symptom-free. This case will be reported later in detail.

Within the last few weeks the Aschheim-Zondek reaction has aided us in diagnosing an ectopic pregnancy. This patient's July period came a few days early; then she bled normally from August 21 to 26, bleeding returning August 29 to September 2, without pain or distress. On September 6 she had several attacks of cramping pain which continued off and on for a couple of days but which was relieved by taking aspirin. In all, she had but four such crampy attacks which were later replaced by pain running down her thigh. She applied to my service on September 12, having a small right tubal mass. At this time an Aschheim-Zondek test was positive. We tentatively diagnosed an early tubal abortion which did not seem confirmed by the blood picture when she entered the hospital on September 18, when the red blood count was normal, the white blood cells were 7720, with 67 per cent of polymorphic leukocytes. The blood sedimentation time was three hours and twenty-minutes. Yet operation on the following day proved the tentative diagnosis was correct. The Aschheim-Zondek test

was positive on the day of operation, and seven days later, but was negative two weeks after operation. While the specimen presented grossly only as a tubal abortion, microscopic study disclosed several small areas of chorionic villi still firmly attached to the walls of the tube in a few places.

The use of this diagnostic aid suggests a wider field for application. The reaction, supposedly due to living chorionic villi, may be due only to the fetal epithelium as is suggested by Eberhardt's case of chorio-epithelioma in which only remote metastases were found without the uterine tumor. It well may be that the varying strengths of the test may prove useful in the event patients with normal pregnancy may have unduly large amounts of syncytial cells in the lung and liver which cause such symptoms as hyperemesis or other toxemias of pregnancy which at present remain as unsolved problems.

Doctor McNeile's paper is timely and presents a critical review of the literature which should be of interest to any advanced student in obstetrics.

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H. A. STEPHENSON, M. D. (490 Post Street, San Francisco).—Doctors McNeile and Reynolds have surely given us a complete résumé of the literature on this subject. Since it is becoming increasingly necessary to make a positive and early diagnosis of pregnancy we are coming more and more to rely on the Friedman test. We agree with Doctor McNeile that it would be much wiser to have the urine collected from the patient by a nurse so that we may be absolutely sure that the specimen is the proper one. We have not taken this precaution in the past, but shall do so in the future. We have had no experience with the technique of the test as we have depended upon reliable laboratories. Done in this way the test has been in our practice 100 per cent successful.

WASSERMANN-FAST SYPHILIS*

By MERRILL W. HOLLINGSWORTH, M. D.
Santa Ana

DISCUSSION by Samuel Ayres, Jr., M. D., Los Angeles;
Donald A. Charnock, M. D., Los Angeles; Hermann
Schussler, Jr., M. D., San Francisco.

THE term "Wassermann-fast" is given to a case of syphilis that still shows a positive Wassermann reaction after having been treated over a period of three or more years by ordinary chemotherapeutic methods. This includes any combination of the arsphenamins, bismuth, mercury, and the iodids. For the purpose of this paper we will consider only those cases in whom all clinical manifestations of syphilis have been arrested, and we will also exclude cases of paresis.

SIGNIFICANCE OF THE WASSERMANN-FAST REACTION

Following our best interpretation of the Wassermann reaction we find it is supposed to be positive when certain enzymes are circulating in the blood. These enzymes result from the antigenic action of certain foreign lipid-protein mixtures or compounds, such as the bodies of dead spirochaetes. The spirochaete multiplies by simple fission and if its environmental conditions are favorable the spirochaete does not ever need to die. In conditions where no spirochaetes are being

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killed we would expect to find a negative Wassermann reaction. We do find such reactions in congenital syphilis during the first two months after birth and in malignant syphilis. In both these conditions the proliferation of the spirochaete is unabated. When death of some of the spirochaetes begins to take place the Wassermann reaction becomes positive. Although the actual mechanism of the Wassermann reaction is known to differ from the purely immunological reaction of a Widal test a positive Wassermann test does seem to mean that the parasites are still being killed within the body of the host. If spirochaetes are still being killed the host is still potentially a case of clinical syphilis. This leads us to the inference that we should never entirely cease some kind of antiluetic treatment in a patient with a persistently positive Wassermann reaction. The reaction is considered persistent if still positive in not less than six months after treatment has ceased.

Why does the chemotherapeutic program sometimes fail with the resultant production of the Wassermann-fast group? How does this group differ in clinical pathology from the easily cured group? It is commonly known that cases of syphilis exhibiting the typical skin lesions but rarely become cases of neurosyphilis or cases of Wassermann-fast syphilis, even with indifferent treatment. The occurrence of the efflorescence in some way apparently builds up a degree of resistance in the host that gives chemotherapy sufficient support to effect a complete eradication of all spirochaetes. Kyrle¹ made use of the resistance-building factor of the skin in Finger's clinic in Vienna by inoculating cases of Wassermann-fast cerebrospinal syphilis with fresh spirochaetes taken from chancres on other patients. Inoculations were made on the upper arm and a gumma produced. The production of even this skin lesion gave sufficient biological support to chemotherapy to render the blood and spinal fluid Wassermann negative and the lesion itself easily cleared up during the process. Later he tried, with some degree of success, to accomplish the same result with injections of a gelation called mirion.

WEAKNESS OF THE ARSPHENAMINS

The arsphenamins are excellent spirochaetocides, provided the spirochaetes can be exposed to their action. In early syphilis, when the disease is a blood-stream infection, the arsphenamins represent the machine-guns that with a sudden spurt mow down an enemy coming over the trenches. But after the enemy has dug in we have a different problem. The arsphenamins find themselves fixed or exhausted on some kinds of visceral tissue and especially on nerve tissue before reaching the spirochaete imbedded therein. Nerve tissue and spirochaete are both lipoids, and the arsphenamins are a series of lipid dyes. This shielding action of some visceral tissues, especially nerve tissue, coupled with their lack of resistance-building factors, makes a good setting for the development of the Wassermann-fast case in cases where skin lesions were never present. Further efforts to improve the arsphenamins would seem futile; what

we need is an entirely different approach. Here we can use bismuth, the patient and persistent sniper that stays on the job hour after hour, every day in the month, ready to kill any of the enemy that stick their heads above the trenches. But what collateral measures can we use to substitute for skin lesions in getting the enemy out of the trenches?

NONSPECIFIC STIMULATION THERAPY

In casting about for some means with which to try to alter the Wassermann-fast patient's reaction we may first study the effect of malarial therapy on paresis. Paresis, we all know, with its strongly positive Wassermann on both the blood and spinal fluid, is most refractory to ordinary chemotherapeutic treatment. But after malarial inoculation, when properly combined with chemotherapy, a very large percentage of paretics show a negative fluid and a somewhat smaller percentage a negative blood reaction. The mechanism of malarial therapy has been studied and explained by Joseph Schumacher.² Inasmuch as this concerns our treatment of the Wassermann-fast case we will review it here. He demonstrated that the parenteral injection of lipoids stimulates the proliferation of lipolytic enzymes. Likewise the injection of foreign proteins produces proteolytic enzymes. The simultaneous but separate injection of these two antigens in the same animal body causes the formation of the two enzymes separately. Although these two enzymes may exist concurrently in the same patient they exhibit no lytic action on a lipoprotein. This requires a third member, the lipoproteolytic enzyme. But if the lipid antigen and the protein antigen are simply mixed together before injection, the third enzyme is produced, namely, a lipoproteolytic enzyme. The enzyme is nonspecific biologically or as an immune body, but is very specific chemically; that is, the enzymes produced by injecting a mixture of lipoids and proteins derived from plants will show a lytic action on lipoproteins of animal origin. The body of the spirochaete, being a lipoprotein, stimulates the proliferation of these lipoproteolytic enzymes when it is killed within the body of the host. These enzymes have a lytic action on the syphilitic lesions including possibly some direct spirochaeticidal effect. In malarial therapy the disintegrating red blood cells plus the dead plasmodia following quinin furnish excellent antigenic lipoproteins. The enzymes resulting can permeate the visceral and nerve tissue and expose the imbedded spirochaetes to our chemotherapeutic drugs—besides having some direct effect of their own. But malarial therapy, assuming for the moment it to be the treatment for Wassermann-fast syphilis, is too inconvenient to be used in the ambulant office case of ordinary syphilis. The analysis of its action, however, suggests that the parenteral injection of a lipoprotein might give an equivalent result not only for paresis but for Wassermann-fast cases.³ Hardesty applied Schumacher's conclusions to the treatment of seventy-five luetics in all stages. His lipoprotein injection was made up from the antigen used in the Wassermann test

plus milk. Although clinical results were excellent, owing to his use of a Wassermann antigen, his cases showed a slow return to negative. However, it is not necessary to combine a Wassermann antigen with milk, as milk alone offers a convenient, easily obtainable lipoprotein. Many references to its use have been accumulating since 1917. It has been given a position but slightly inferior to malarial treatment by numerous investigators. In 1927, I⁴ reported its use in my experience and since then have found it to be very effective in prophylaxis and treatment of Wassermann-fast cases. A point to remember is that the injection of the milk itself is sufficient frequently to cause a positive Wassermann reaction, so one does not expect a negative reaction until six months have elapsed after the last injection. Boiled skimmed milk is used, intramuscular injections of 2, 4, 6, and 8 milligrams successively, being given at weekly intervals while administering some salt of bismuth to a total of 2.0 gram. Since the Wassermann-fast case has already been very well treated with the arsphenamin series, I believe the more continuous action of bismuth better suited to treatment of such a case. In early syphilis, intramuscular injections of milk (total of four to six doses) are given during the first course of bismuth. In late cases milk and bismuth alone are used. If necessary such a course of twelve injections of bismuth and four injections of milk may be repeated after a year. This form of therapy has been very successful in my experience in cases where there has been no question of paresis.

REPORT OF CASE

A surgeon referred to me his sister-in-law on whom he had operated for uterine fibroids. Failure of the wound to heal properly led him to have a blood Wassermann test made. This was four plus. Then it was discovered that the patient's divorced husband had contracted syphilis while still living with her. The surgeon found no other evidence of lues in the patient besides the failure of the wound to heal and the positive Wassermann test. He at once instituted the most vigorous treatment, using 0.9 gram dosages of neoarsphenamin in courses of twelve weekly injections with alternating courses of mercury rubs. After three years of such treatment, with practically no rest periods, the patient still had a four plus blood Wassermann but a negative spinal fluid reaction. A rest period of twelve months was advised and the blood Wassermann was still four plus. Six weekly injections of 0.2 gram bismuth salicylate were given, and with the first four injections 2, 4, 6, and 8 milligrams of aolan were given in the opposite buttock. Six months after the last injection of bismuth the blood Wassermann reaction was negative. The course will be repeated after another rest period of twelve months.

CONCLUSIONS

1. The persistently positive Wassermann reaction means potential recurrence of clinical syphilis.
2. Treatment should not be stopped altogether on Wassermann-fast syphilis.
3. A program of treatment is suggested, employing nonspecific stimulation therapy in conjunction with administration of bismuth.

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DISCUSSION

SAMUEL AYRES, JR., M. D. (2007 Wilshire Boulevard, Los Angeles.)—If the question were asked whether it was more important to treat a case of clinically active syphilis showing a negative Wassermann, which not infrequently occurs late in the disease, or a case of clinically inactive syphilis with a persistently positive Wassermann, I think all would agree that the former was more deserving of treatment. Again, might it not be preferable to live twenty-five years longer with clinically negative Wassermann-fast syphilis than to die twenty years sooner from an overdosage of medication in an effort to render the blood negative.

The essayist has assumed a highly commendable attitude of conservatism in handling this dilemma. Until our knowledge of biochemistry is greater than it is now, we must assume that a persistently positive Wassermann reaction is a potential source of danger. On the other hand, it would seem unreasonable to run the risk of shortening one's life by excessively vigorous chemotherapy on top of an ordinarily adequate amount of treatment.

Nonspecific therapy seems to offer a choice which is often effective without being drastic. In addition to the milk injections which have been mentioned, another procedure was suggested by Wernick¹ and later by Beinhauer and Jacob,² namely, the intravenous injections of sodium thiosulphate. The mode of action of this drug in Wassermann-fast syphilis is not definitely known. In cases of metallic poisoning, such as arsenic poisoning, it is thought to be effective by combining with the metal which has formed an insoluble compound with tissue proteins, producing a new soluble compound which then can be excreted in the urine. Many observations in cases of arsenic poisoning where an increased arsenic excretion follows the injection of sodium thiosulphate would tend to substantiate this hypothesis. It is conceivable then that the action of sodium thiosulphate in Wassermann-fast syphilis might be due to the formation of therapeutically active soluble compounds with metals which had been stored in the tissues in an unavailable form. On the other hand, its action may be more in the nature of a non-specific effect.

One patient may be cited in whom the administration of sodium thiosulphate marked the turning point in a persistently positive Wassermann. It is, of course, impossible to say whether the change was a matter of cause and effect or merely coincidence. Mr. P., age about forty-five, was first seen with symptoms of early tabes dorsalis: diplopia, Argyll-Robertson pupils, absent knee-jerks, and genital impotence. The blood Wassermann reaction was four plus. In spite of prolonged treatment with alternating courses of neoarsphenamin, mercury, various types of bismuth, iodids, and triparsamid, the Wassermann remained persistently positive for six years, giving four-plus reactions except on three occasions, when it gave a three-plus reaction. The last test before beginning sodium thio-

¹ Wernick, R.: *Hyposulphite of Soda in the Treatment of Mercury and Arsenic-Fast Syphilis*, *Am. J. Syph.*, 9: 563 (July), 1925.

² Beinhauer, L. G., and Jacob, F. M.: *Sodium Thiosulphate in Wassermann-Fast Syphilis*, *Am. Jour. Syph.*, 12: 61 (Jan.), 1928.

sulphate was four plus. Eight intravenous injections of sodium thiosulphate were given on an average of a week apart, most of the injections being of one gram. No blood test was taken immediately at the conclusion of these injections and the patient was not seen again for five months. At this time a Wassermann performed in the same laboratory as the preceding tests was only two plus. The patient did not report again for a year. At this time a Wassermann was not taken, and although he was feeling in excellent condition, he was given ten injections of bismuth, but another blood test was not taken for another nine months, at which time it was only one plus. Since then the patient has been on conservative treatment, consisting of a course of ten injections of bismuth each year. During this time all blood tests have been negative except once three years ago, when a single four-plus reaction was obtained.

In other words, for over six years prior to a series of injections of sodium thiosulphate, the Wassermann test was either three or four plus in spite of vigorous treatment of various types; after the injections of sodium thiosulphate for a like period of six years the blood tests have all been negative except for one two-plus, one one-plus, and one four-plus reaction. A spinal puncture two years ago was also negative.

This case is apparently corroborative of the results obtained by Beinhauer and Jacob in a series of thirty-eight cases of Wassermann-fast syphilitic cases. Eighty-five per cent were serologically improved after a course of sodium thiosulphate intravenously, and thirty-five per cent of the cases became Wassermann-negative and remained so for periods of more than one year without any further antiluetic treatment.

It would seem that the various methods of nonspecific therapy deserve serious consideration in the handling of Wassermann-fast cases. On the other hand, it does not mean that the problem is necessarily finished as soon as the Wassermann reaction becomes negative in these cases. Short courses of specific therapy, such as bismuth, given about once a year might be considered as good life insurance.

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DONALD A. CHARNOCK, M. D. (523 West Sixth Street, Los Angeles).—The Wassermann-fast patient presents an important problem. We are still in doubt as to the mechanism of the shift from the normal in the complement-fixation test. Some observers hold that such persistent reactions are an inherent property of the serum and in no way indicate a syphilitic focus (Kilduff: *Clinical Interpretation of Blood Examinations*, L. and F., 1931). Other equally sincere investigators emphasize that necropsy shows such cases to have a high percentage of cardiovascular, neurological or visceral lesions (Fordyce, *Am. J. Med. Sci.*, Vol. 166, p. 3, 1923, and Stokes and Burman, *Am. J. Med. Sci.*, Vol. 160, p. 584, 1920).

While we are philosophizing about this problem we too often forget the patient. We have taught him that a positive Wassermann means syphilis. He is not greatly impressed by our academic discussion when he knows that his blood is still "two plus." Whatever may be our feeling about his case it is our duty to use whatever means we have available to control what is potentially an active infection.

The rôle of the nonspecific agent seems to be that of a catalyzer which increases the potency of the spirocheticide. In this way a response is obtained which often reduces the serum reaction to a negative phase.

At the suggestion of Doctor Hollingsworth we have for several months been using the nonspecific milk injections. Aolin has been used for convenience. This has been given in conjunction with active treatment.

While it is yet too early to quote statistics we have already had one very stubborn Wassermann-fast case show a negative reaction.

In using this method it should be understood that the milk injections are not being used as a form of

"protein shock" treatment. The introduction of the milk increases the lipoprotein content of the individual's blood and thus stimulates the lipoproteolytic enzyme.

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HERMANN SCHUSSLER, JR., M. D. (384 Post Street, San Francisco).—The problem of the clinically latent case of syphilis, with persistently positive serology, has been a challenge to syphilologists ever since the introduction of the Wassermann test. Hypotheses as to the significance of Wassermann-fastness have ranged from Wile's conception of a "scar" persisting after actual cure, to the belief that hidden active lesions are always present. Certainly there are many patients who carry a positive Wassermann for the remainder of their long lives without a clinical relapse, and others who succumb rapidly to injudicious therapeutic attempts to reverse their apparently harmless positive readings. On the other hand, the disquieting frequency with which we find visceral syphilitic lesions at autopsy in clinically latent Wassermann-fast patients, makes us wonder how many of these would have developed clinical aortitis or hepatitis if they had lived longer. It is assumed for the purpose of this discussion that patients with positive spinal fluids are classified as cases of "asymptomatic neurosyphilis" rather than Wassermann-fastness, and that all clinical evidence of syphilis is absent.

Many methods have been suggested for rendering the fixed positive Wassermann negative. A partial list of these would include: (1) nonspecific protein therapy; (2) lipoprotein therapy with bismuth (Hollingsworth); (3) sodium thiosulphate, with or without subsequent specific treatment; (4) silver salvarsan or old arsphenamin when neoarsphenamin has been used; (5) bismuth when mercury has been used, and vice versa; (6) colloidal mercury sulphid; (7) giving mercuric chlorid and other mercurials intravenously; (8) intravenous sodium iodid injections; (9) radical removal of focal infections; (10) correction of functional disturbances, such as hypothyroidism or achylia gastrica.

In every one of these procedures there are a certain number of successes to its credit, as shown by the statistics of its proponents, but none of them is effective in all cases. Hence it is often necessary to try several in succession, giving each a fair trial before abandoning it. The simplest and least dangerous should of course be used first. Sodium thiosulphate is more likely to succeed in patients who are saturated with heavy metals, so that a minute additional dose of mercury or bismuth will precipitate a stomatitis. Here a course of twenty doses of one gram of the freshly dissolved crystals in ampoules, given twice a week, will purge the body of its deadweight of inert heavy metal. After a suitable rest period, one may then start afresh.

I have had no experience with Doctor Hollingsworth's technique, and would like to ask him whether he prefers milk to aolan or ommadin, and whether there is any objection to a longer course than six injections, or to the use of full doses from the start.

I feel that focal infections often tend to keep a Wassermann test positive, and that their removal is often followed by serological reversal without other treatment. It must always be remembered, however, that a fixed positive sometimes becomes negative after a year or two of complete rest from all treatment. Recently I have been using colloidal mercury sulphid in these cases, giving two or three cubic centimeters twice a week for six months, with occasional brief rests, as advocated by Wilhelm Gennerich of Kiel. The Wassermann response has been quite favorable, and the intramuscular injections are painless and well borne. Dr. M. J. Freeman has given over sixty thousand injections in the Chicago Board of Health clinic, and writes me that he has obtained 25 per cent of permanent serological reversals in Wassermann-fast cases. Perhaps this preparation might be even more effective than bismuth salicylate when milk injections are used.

In closing, a few philosophical comments may be in order. Why are we so anxious to reverse a fixed positive Wassermann? Is it to satisfy the patient, or do we ourselves feel a haunting twinge of conscience in the matter? If a brief course of the new procedure accomplishes the reversal (*e. g.*, a few doses of milk and bismuth, or of sodium thiosulphate, or of colloidal HgS.), can we seriously maintain that the underlying visceral lesion, which we assume to be present and responsible, has *thereby* been permanently extinguished? When a modern syphilologist finds, in the treatment of an early secondary case, that the Wassermann has become persistently negative after the first course, he does not stop treatment and congratulate the patient on his good fortune, but silently proceeds without rest periods for at least another year. Nor does he shorten the treatment of a tertiary ulcer or a visceral lesion because the patient has never shown a positive Wassermann while under observation. Most of us would do well to reflect occasionally on Hans Lisser's succinct observation, "A negative Wassermann test means exactly nothing." In our frantic attempts to obtain this result in a clinically cured patient, are we not often pursuing a will-o'-the-wisp?

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DOCTOR HOLLINGSWORTH (Closing).—Although I fully appreciate the question raised whether we are treating a patient or his laboratory report, I do believe for the reasons I stated that a patient is not cured but still needs treatment if his Wassermann or Kahn test is persistently positive.

I am very pleased to hear Doctors Ayres, Charnock, and Schussler agreeing with my statement that what the Wassermann-fast patient needs is *different*, rather than simply *more* treatment. Changing the type of arsphenamin has given me no satisfaction. In fact I am almost beginning to believe the importance of the arsphenamins in the treatment of late syphilis has been greatly exaggerated. I am unable to discuss sodium thiosulphate because of no experience. We practically always limit the number of lipoprotein injections to four because we fear the production of anaphylaxis, and four seems adequate. Aolan produces less local reaction and has been preferred lately in office practice. We had but one reaction from milk in five years in two large clinics, then had two the same day and a third within the same week. Subsequent investigation led me to believe they were injected into a blood vessel. All four reactions occurred within two minutes after the second injection before the patient could get out of the treatment room and, though severe, very readily responded to adrenalin, ephedrin, and atropin.

PEPTIC ULCER—ITS CLINICAL ASPECTS*

REPORT OF CASES

By F. A. SPEIK, M. D.

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DISCUSSION by Franklin R. Nuzum, M. D., Santa Barbara; Fred H. Kruse, M. D., San Francisco; Grant H. Lanphere, M. D., Los Angeles.

SIPPY stated that peptic ulcer was one of the most common diseases of a serious nature that the medical man is called upon to treat. The Mayos' pathologic and surgical statistics show that ulcer is common to 12 per cent of the race. In a city the size of Pasadena there may be 8,400 ulcer cases. Many go untreated, some heal without treatment, and many do not heal with treatment. More

would heal better and more permanently if the digestively upset patient would present himself earlier for examination. If people would pay more attention to their insides and less to their outsides, many more ulcers would be found and cured and many cancers discovered earlier.

COMMENTS ON ETIOLOGY, SYMPTOMS, AND TREATMENT

Although the etiology of ulcer is unknown (Alvarez) we must respect the probable causes, such as foci of infection of the nasal accessory sinuses, and teeth; arteriosclerosis, trauma, allergy, mechanical irritation, nervous worry, unhappiness, syphilis, and other systemic infections. Where any of these etiologic factors exist, they should be removed at once. Also search should be made for pathology in the portal lymphatic system, as a source of the cause of ulcer, and if any such be present it should be removed.

The symptoms of peptic ulcer are well known. These vary according to the type, location, age of the ulcer, and the complications that may be present. The clinical symptoms of ulcer may be masked by the associated pathology that may be present.

Properly to treat peptic ulcer, due consideration must be given to these varying symptoms and possible associated pathology. The complications which demand surgery are: perforation, perigastric adhesions, perigastric abscess, hour-glass stomach, obstruction of high grade due to scar-tissue formation, suspicious possible malignant degeneration. Simple ulcers without complications, and those with such complications as obstruction due to spasm, inflammatory swelling and edema, and the vast majority of the cases of hemorrhage, should be treated medically. Penetrating ulcers of the lesser curvature and duodenum yield readily to proper medical treatment. (See Figs. 1, 2, and 3.)

A knowledge of the possibilities and probabilities calls for a complete history, thorough physical examination, and the proper laboratory tests. With this evidence at hand, it is then necessary to have the patient radiographed. The x-ray will not only aid in telling whether or not an ulcer is present but it will also tell us the location of the ulcer, its type, and a clue to its complications. It will aid in diagnosis of cancer by the definite finger-print markings, which are easily read.

However, there are certain types of ulcer that the x-ray misses. These are the simple types of ulcer without complications and without any definite changes in the wall of the stomach. Many of these ulcers exist in the stomach, and should be treated before they present x-ray evidence of their existence. As a matter of fact, the x-ray should be used to confirm or reject the original diagnosis only when it is used in connection with other findings in the case. In other words, do not forget common sense when using a special sense.

Another type of ulcer that gives misleading findings under x-ray is the stenosing type. Many times in true obstruction the barium-meal mixture will be *forced* out of the stomach by the hyper-peristalsis; and then again we may have *delay* in

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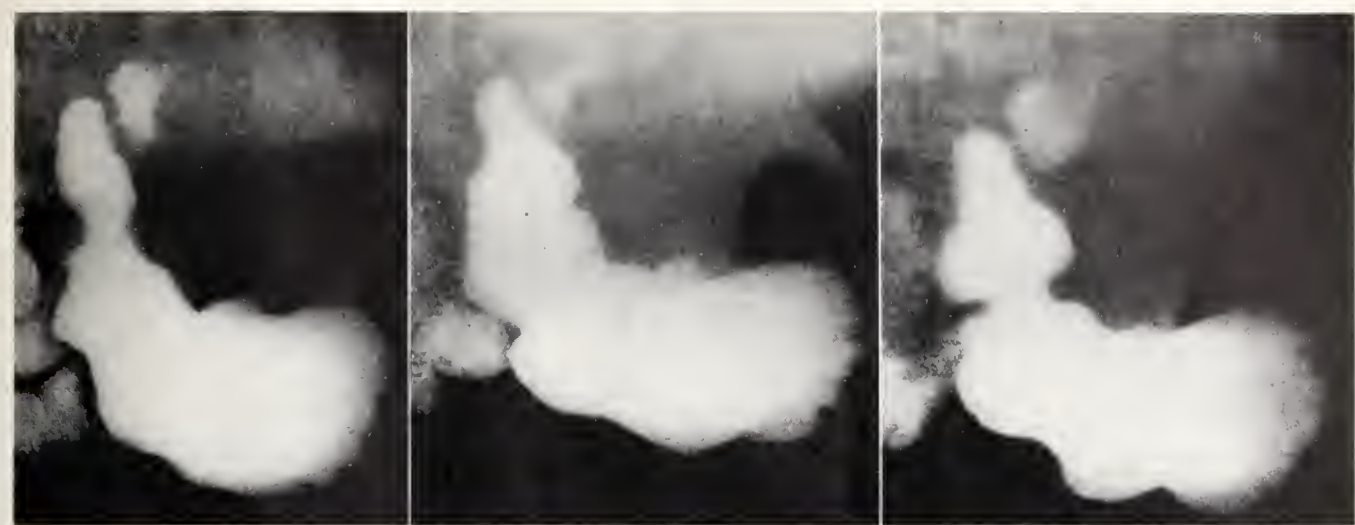


Fig. 1.—Before treatment.

Fig. 2.—Twelve days after treatment.

Fig. 3.—Twenty-seven days after treatment.

getting rid of the x-ray meal when there is *no* definite stenosis.

Clinical study, together with the proper test-meals, will help establish the type of obstruction. The question as to the cause of the stenosis must be answered before the patient is put under treatment because scar-tissue obstruction of high grade should be operated upon, except where the patient has severe organic heart disease or other systemic disease not permitting abdominal section. On the other hand, many obstructive cases may seem complete, but upon observation and treatment it will be found that the obstruction is due merely to spasm, or inflammatory swelling, or associated pathology.

Not only is the x-ray valuable for the proper diagnosis of ulcer, but it is also most valuable in checking the progress of the healing while under treatment. If the ulcer is of the penetrating type, a considerable filling up of the defect will be noted at the end of ten days or two weeks. Further study during the next fortnight will show more complete healing and not infrequently a complete disappearance of the ulcer deformity. A probable malignant ulcer will not show any marked change.

ASSOCIATED LESIONS

Another great problem in the medical and surgical treatment of peptic ulcer is the frequency of the association of lesions of the viscera of the portal lymphatic system. A patient may have more than one condition present at the same time. There is a definite interrelationship of infections of the gall-bladder, stomach, pancreas, and appendix. This should always be borne in mind, and it is often necessary to do a general exploration. Such explorations often find lesions whose presence had not previously been suspected.

There is not only a recurrence of the symptom complex of ulcer of the duodenum and stomach, but serious conditions may arise in any viscera in the portal lymphatic system. "Studies have shown that these viscera are closely connected through the lymphatics, that infection readily passes from one to the other" (E. S. Judd¹).

The studies of E. A. Graham, and especially Scheichi Kodama² show in their conclusions that:

- (1) "The lymphatics of the duodenum and gall-bladder are intimately and directly connected";
- (2) "Some of the lymphatic vessels of the liver, gall-bladder, duodenum, pancreas, and appendix enter the lymph glands which are located about the portal vein." By this explanation it is easy to understand why there exists the frequent association of lesions of the portal system if one thinks of these portal lesions as producing a hepatitis which spreads by the lymphatics.

E. S. Judd³ emphasizes the fact that cholecystitis is almost invariably associated with a certain grade of hepatitis or pancreatitis or both. These studies emphasize the great importance of the recognition and the further study of the pathological processes in the viscera of the portal lymphatic system.

SUMMARY OF TWO HUNDRED AND NINETY-NINE CASES

Clinically, in a review of 299 cases of peptic ulcer treated by the Sippy method at the Pasadena Hospital, we were impressed with the frequency of the association of lesions of the appendix, the gall-bladder, the liver, and the pancreas, with duodenal and gastric ulcer.

In a review of the 299 cases treated in the last forty-eight months, the records show:

Appendix removed prior to diagnosis of ulcer.....	67
Chronic appendix diagnosed during management.....	51
Appendix out during management.....	13
Appendix out following treatment.....	12
Gall-bladder removed prior to diagnosis of ulcer.....	12
Gall-bladder diagnosed chronic during management.....	48
Gall-bladder out during management.....	4
Gall-bladder with stones.....	6
Total	213

These figures present a total of 213 cases of portal lymphatic lesions in association with 299 cases of ulcer, aside from focal infections elsewhere.

Of this number are cited three case reports, which, since they are complete cases, focus the attention on the lesions of viscera of the portal lymphatic system. The necropsy reports are attached in two cases, clearly demonstrating associated lesions of peptic ulcer.

REPORT OF CASES

CASE 1.—*Ulcer of lesser curvature, with stone and empyema of gall-bladder.* Dr. G. F., age sixty-five, was diagnosed peptic ulcer, December 7, 1927. (See Fig. 1.) History of a similar attack eight years prior, associated with jaundice. The size and depth of his ulcer made it seem very probable that it was malignant. There was but slight evidence of shading of the barium shadow around the ulcer and no real filling defect adjacent to it. The general appearance of the patient and the fact that he had free HCl 53 and total 68, gave the opinion that it was benign. He was put to bed and treated by the Sippy method. A second x-ray series (twelve days after) on December 19, 1927, showed "Marked progress in healing of the ulcer." (See Fig. 2.) Patient symptom-free after the first week. A third x-ray series January 3, 1928 (two weeks later), found "Ulcer shadow much smaller." (See Fig. 3.) He left the hospital January 10, 1928.

On January 23, 1928, at midnight, he was seized with sudden severe pain in the epigastrium, with nausea and elevation of temperature. With the knowledge that his ulcer was healing and the association of portal lymphatic infection, a diagnosis of an acute exacerbation of a chronic cholecystitis was made. Dr. John Breyer, the surgeon, found the gall-bladder buried in adhesions, swollen, tense, and reddish grey; thickening of lesser curvature (area of the ulcer) and the appendix long and fibrous. The laboratory diagnosis found cholecystitis (empyema) with a single stone. The patient left the hospital February 22, 1928, having gained thirty pounds and "feeling fine."

On October 1, 1928, he was seized with severe pain in left shoulder and abdomen. Lungs were negative. Jaundice and tenderness over liver suggested hepatitis. Leukocytes 16,500 with 94 per cent polynuclears. The second day he developed a chill, temperature of 106. A pleural friction rub and crepitation. Râles in the left chest. Pneumonia was diagnosed. Death on the fourth day.

Autopsy, by Dr. Frank Sturdevant, was:

Left pleural cavity: A few small fibrinous adhesions on lower lobe near the base. *Left lung:* Healed tuberculosis foci at apex. Small interlobular adhesions. Consolidation of one-third of the lower lobe (red hepatization). *Right pleural cavity:* Old and dense adhesions to lung and pleura throughout, congestion and edema of right lower lobe, but no consolidation. *Aorta:* Arteriosclerotic plaques present (narrowed and sclerotic). *Abdominal cavity:* Omentum is adherent to the peritoneum anteriorly. *Liver:* Small, mottled, and cuts with increased resistance. Thrombosis of portal vein. A two centimeter abscess in the upper part of right lobe. A stone in the common duct, measuring 0.6 centimeter in diameter. Pancreas edematous and fibrous and blood vessels sclerosed and thrombosed. Thrombosis of splenic artery. *Appendix:* Fibrotic. *Stomach:* Ulcer scar at the pyloric ring, obstructing pyloric opening, about one-third. On the lesser curvature, midway between the pylorus and cardia, an old healed ulcer 1.2 centimeter in diameter. (Stomach dilated.) *Bladder:* Contracted, enlarged plus two. *Left kidney:* Enlarged one-third. Capsule thickened and adherent, strips leaving a granular surface. (Chronic, with an acute parenchymatous nephritis.) *Right kidney:* Similar to left, except for a small amount of pus in the pelvis. Marked arteriosclerosis of the abdominal arteries and iliaes.

Summary:

1. Chronic pleuritis (right).
2. Healed tuberculosis of left apex.
3. Embolic pneumonia of left lower lobe with an associated acute pleuritis.
4. Arteriosclerosis.
5. Acute, subacute and chronic hepatitis, pancreatitis and splenitis.
6. Healed ulcer of stomach.
7. Stone in common duct and liver abscess.
8. Portal pancreatic, and splenic thrombosis.
9. Healed gastric ulcers with pyloric obstruction.
10. Acute and chronic nephritis.

Causes of Death:

Primary:

1. Portal thrombosis.
2. Liver abscess.
3. Stone in common duct.

Contributory:

1. Embolic pneumonia.
2. Acute parenchymatous nephritis.

This illustrates the association of gastric ulcer with cholecystitis.

The right upper quadrant is the surgical site of the abdomen, due entirely to the evil associations of the important viscera of the portal lymphatic system. To get rid of this evil the possibilities of the association of the appendix, the gall-bladder, and the pancreas with ulcer of the stomach should be borne in mind.

CASE 2.—*Duodenal ulcer and appendicitis.* Mr. H. B. S., age forty-eight, had "stomach trouble" for six years. Diagnosed: Ulcer. Ulcer of the duodenum on the lesser curvature, (September 17, 1923.) Ambulatory treatment for three weeks yielded no improvement. Hospitalized, and four weeks later was discharged as "improved." Clinically, showed ulcer still present but smaller.

Six months later he had an acute attack of abdominal pain. Forty-eight hours afterward he walked to the office. White blood count, 30,000; marked rigidity of right lower rectus. "Acute appendicitis" diagnosed and operated upon that afternoon by Dr. H. S. McGee. A gangrenous appendix was removed. Death on tenth day.

Clinical diagnoses: Peritonitis secondary to ruptured appendix and operation. Duodenal ulcer.

Autopsy by Dr. A. M. Moody: Partial obstruction of ileum with dilation of small bowel and stomach. Healed ulcer of duodenum. Wound discharging, with gutta percha drain. Localized small abscesses in region of cecum.

CASE 3.—*Duodenal ulcer and pancreatitis.* Mrs. S. C., age sixty-five, was diagnosed: Duodenal ulcer with low-grade obstruction. Treated at the hospital six weeks. X-ray report, "Marked deformity of the duodenal cap throughout the series." Repeated urine examinations while in the hospital found "no sugar."

On October 1, 1927, she was free from ulcer pain, and had gained in weight from 109 to 152 pounds. At this time she was hospitalized on account of obstructive gastric symptoms and sugar in the urine. Blood sugar was high (300 to 360 milligrams). Treatment with diet and insulin did not relieve. Gastro-enterostomy was done, performed by Dr. H. S. McGee. Patient recovered and was discharged March 24, 1928, with normal blood sugar, and has remained so.

COMMENT

Ulcer in association with pancreatitis can cause hyperglycemia. Surgical and medical management of the duodenal ulcer brought about a return to normal.

Although gastroduodenal ulcers heal under proper medical treatment, we must be constantly on the alert for associated pathology. Intelligent observation, with frequent x-ray examinations, finds that the biggest and deepest ulcers gradually get smaller until they disappear, and the patient is symptom-free. However, many cases in which lesions of the portal lymphatic system exist may have a return of symptoms or a recurrence of ulcer, because these lesions are foci of infection in the gall-bladder or appendix.

Sippy stated that in order to treat peptic ulcer intelligently it is necessary to determine the age, the type, the location, and complication of ulcer. It is necessary to go further and determine if there are any lesions of the portal system, such as cholecystitis, appendicitis, pancreatitis, hepatitis, or peritoneal adhesions.

The taking out of an acute or chronic appendix does not cure the ulcer. Note the number of patients in the table who had an appendectomy before an ulcer was discovered. This is one reason why patients do not always get well following an appendectomy. There is pathology elsewhere.

Patients with foci of infection in the portal lymphatic system should have these foci removed at earliest recognition. If physicians are on the alert for associated ulcer pathology, the diagnosis will be more promptly and better end results will be had.

But after all, as stated by Charles Gordon Heyd, when "all the data have been evaluated, and you have a complete record of the individual's physical state, nevertheless you cannot cure that patient or tell him how to live by handing him a slip of paper, advise him to read it and carry out his own treatment. At some place in the final analysis there must be a personal touch and psychological evaluation of the patient in regard to the advice given him."

CONCLUSIONS

1. X-rays are valuable for the proper diagnosis of ulcer and its complications.
2. Ulcers should be treated earlier, before complications appear.
3. The lymphatic drainage of the stomach, liver, pancreas, and appendix are anatomically closely connected.
4. In 60 per cent of the cases reported above, gastric duodenal ulcer had associated pathology in the liver, the pancreas, the gall-bladder, and the appendix.
5. Healed ulcer will not leave the patient symptom-free unless the associated pathology is eradicated.

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DISCUSSION

FRANKLIN R. NUZUM, M. D. (Cottage Hospital, Santa Barbara).—The author's forceful paper emphasizes the frequency of ulcer and the number of untreated ulcers in every community. He stresses a point infrequently noted in discussions of ulcer, that is, the common association of pathology in the periportal system, particularly the gall-bladder; and insists that ulcer patients must be rid of focal infection, whether it be in teeth, tonsils, periportal system, or prostate, as one phase of ulcer management.

In a recent survey of a large number of ulcer patients coming to the Mayo Clinic, it was found that a high per cent had received very inadequate ulcer management. This inadequate care could in many instances be laid to the door of the physician himself and indicated that in the minds of physicians and, therefore, in the minds of their patients, the importance of ulcer management and proper care was not appreciated.

A reiteration of the oft-repeated but so often unfollowed necessity of continuous control of acid secretion of the stomach in the treatment of ulcer is not amiss: Ideal management consists in hourly feedings of milk and cream, or for those patients who do not tolerate cream, whole milk, from seven o'clock in the morning until seven o'clock in the evening, and on half-hour intervals between, adequate dosage of alkaline powders of the Sippy type. To these feedings other appropriate bland foods are gradually added. Variation in the type of bland food and in the amount of milk and cream is necessary with many individuals.

Whether or not the hydrochloric acid of the stomach is entirely neutralized by the powders and the frequent feedings, should not be left to speculation. One hour following the final evening powder the stomach should be aspirated, removing as much of the content as possible. This content should be titrated for the presence of free acid and, if it is present, the amount of alkaline powder given should be increased to the point that the evening aspirations no longer contain free hydrochloric acid. Proper attention to such details as this often accounts for the difference between success and failure in the treatment of this group of patients.

In a large group of patients who must continue at work, a regimen such as sketched above is followed with difficulty. These persons may mix a given amount of powder with milk in a thermos bottle, take this with them to their work and at the end of each hour drink the proper amount of its content.



FRED H. KRUSE, M. D. (384 Post Street, San Francisco).—The physician who has handled any considerable number of peptic ulcer patients realizes only too well from sad experience that in spite of proper management and control with even a fully cooperative patient, inability to secure relief or periods of exacerbation of an ulcer that should otherwise have yielded to management, frequently means an associated abdominal pathologic condition.

In my experience, a diseased gall-bladder has been the chief abdominal factor in causing recurrences or exacerbations, particularly in duodenal ulcer. Unless such an ulcer quickly heals or remains quiescent, cholecystography should be added to the other studies of the gastro-intestinal tract.

I have observed duodenal ulcers at operations for diseased gall-bladders when only the latter was expected, and have seen acute gall-bladder attacks develop, with the appearance of a cystic gall-bladder tumor in the right upper quadrant, during routine ulcer management. One such case has particularly impressed me: it is that of a man of middle age who had had an ulcer complaint for seven or eight years, which yielded quite readily at first to ulcer management. During the next five years, however, there were rather constant exacerbations, apparently without reason, culminating in an acute gall-bladder attack, with a swollen and tender gall-bladder tumor felt in the right upper quadrant. Since surgery for this condition three years ago, there has been no recurrence of the ulcer symptoms.

Therefore, while admitting the influence of associated pathologic conditions in the abdomen upon peptic ulcer, and its ready exacerbation thereby, still, I feel a warning should be sounded against surgery for borderline gall-bladders and borderline appendices. A large percentage of the patients coming to us for chronic ulcers have had their appendices removed, without any material benefit so far as I have been able to determine. Very likely these particular appendices were not affecting the peptic ulcer as surely some may do. We have learned in cholecystitis, without stones, that the disease is general throughout the liver as well as the gall-bladder and the biliary tract. Surgery only too commonly does not give relief. Therefore, in borderline cases, and in cases where the gall-bladder fills and empties well, even though an associated cholecystitis and hepatitis are suspected, I think measures other than surgery are indicated, and I feel that this state-

ment would include many of the female pelvic conditions, which might be thought to exacerbate ulcer.

All these conditions should be kept in mind, and when definite pathologic states can be demonstrated, in spite of right management, these foci should be eliminated. I should be sorry to see a general wave of abdominal surgery follow upon a demonstration of the larger percentage of peptic ulcers. Just as we feel that focal infections about the head—tonsils, teeth, and nasal sinuses—may influence the ulcer, and ultimately should be cleared up, so must the abdominal influences be considered, but radical procedures are not indicated in any of these conditions.

I particularly agree with and desire to emphasize Doctor Speik's statement about the ready and complete healing of gastric ulcer by the proper regimen and under the right observation and control. In the University of California Hospital we have had a series of cases of these lesions on the lesser curvature in which malignancy has been considered as against benign ulcer. A careful period of rest for two weeks and ulcer treatment, with a rescreening at that time and a comparison of results, has proved how astoundingly well and rapidly a gastric ulcer will heal, and how frequently this period of therapeutic observation is of value in discriminating between a benign and a malignant lesion.

I also want to emphasize that six-hour retention when first observed does not mean stenosis, and even when stenosis exists it is surprising how well many of these patients get along if the stenosis itself is the only factor involved (that is, if there is no great hypersecretion and no concomitant ulceration or irritation about the site of an old ulcer). Of course, hypersecretion very commonly exists in stenosis and recurring ulceration is frequent.

In people well advanced in years with stenosis, and where other contraindications exist for operation, a careful program, including moderate alkalinization and emptying of the stomach at night, will result in relief of symptoms which, when once relieved, if the patient is careful about diet and rest, may not recur. I have in mind three cases of old duodenal ulcer, completely healed, with marked stenosis at the pylorus, with almost complete six-hour retention, in individuals of sixty-five to seventy-two years of age, who are perfectly comfortable and happy, and as long as they exercise reasonable care in their diet they suffer no distress.

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GRANT H. LANPHERE, M. D. (1930 Wilshire Boulevard, Los Angeles).—We have found in the past that a majority of peptic ulcers heal with no treatment or any treatment. The minority are sometimes very resistant to the best forms of management. A comparison of investigations in the clinical aspects prevalent in the efforts to further the physiologic and pathogenic studies in the etiology, pathogenesis and treatment of ulcer, is afforded in this opportunity to join in the discussions of Doctor Speik's presentation.

His points in the use of the roentgen-ray in the study of ulcer are well taken. We might add in this connection that we find that roentgen-ray examinations do not always reveal the presence of small ulcers in the walls of the stomach and duodenum.

In his discussion of peptic ulcer associated with the lesions of viscera of the portal lymphatic system, he states that the taking out of an acute or chronic appendix does not cure the ulcer because there is pathology elsewhere. May we add that in spite of the conception on the part of some that a diseased appendix causes pylorospasms, the removal of the appendix seldom results in the cure of the ulcer.

We agree with Doctor Speik that the clinical symptoms of ulcer are oftentimes masked by the associated pathology that may be present. Ulcer symptoms are frequently made worse, and the ulcer prevented from healing due to the presence of diseased conditions of other organs, particularly the liver, gall-bladder, large intestine, and organs of the pelvis.

He draws the conclusion that healed ulcer will not leave the patient symptom-free unless the associated pathology is eradicated. Granted it were possible to remove all foci of infection, may we go a step further and add that neither can the constitutional pathology nor the neurogenic factor be disregarded.

We believe that ulcer patients are deviations from the normal and that they are constitutionally predisposed to the formation of ulcer. This predisposing cause, which is as yet undetermined, is probably present from birth in the so-called vagotonic individual. The etiology, pathogenesis, and treatment of ulcer still depends upon the discovery of this predisposing factor, which undoubtedly operates through the nervous system.

We grant that treatment of ulcer requires consideration of type, location, age of ulcer, associated pathology and possible complications, and that these complications have their sources in part in focal infections which require surgery and medical treatment.

Surgery and medical treatment afford opportunity for obtaining subjective evidence regarding the needs of the so-called vagotonic individual. This is the individual who requires adjustment to and relief from anxiety and emotional strain. We venture the assertion that Doctor Speik has this in mind in quoting Charles Gordon Heyd as follows: "At some place in the final analysis there must be a personal touch and psychological evaluation of the patient in regard to advice given him."

Dr. E. S. Judd maintains that experience seems to show that there is a tendency to the formation of ulcer in certain individuals, and that no matter what treatment is undertaken, recurrence is almost certain to take place.

We believe that nervous imbalance prevents normal pyloric function and that all conditions which produce a state of fear and excitement and its consequent disturbance in the high-strung, emotional, vagotonic individual with sensitive nervous system and certain physical peculiarities which clearly distinguish him from the sympathicotonic type, requires, aside from whatever surgery the case demands, medical management that includes guidance and control of the increased nervous tension of the neurotic, wearisome, emotional, and probably hard-working individual, particularly in the intractable case of peptic ulcer in its clinical aspects.

Therefore we proceed on the theory that since ulcer patients are governed by influences operating through the nervous system, and that all possible surgical and medical management must recognize this fact, ulcer patients are completely cured, if ever, by treatment that is successful in relieving them from emotional strain and which results to them in a feeling of general well-being.

LIFE INSURANCE EXAMINATIONS

By THOMAS G. DABNEY, M. D.
San Francisco

DISCUSSION by Henry W. Gibbons, M. D., Sacramento;
C. Coleman Berwick, M. D., San Francisco; W. W. Beckett,
M. D., Los Angeles.

ALONG with modern developments in social, industrial, and economic life have come important changes in conditions affecting life insurance mortality. As a result there has occurred increased difficulty of diagnosis and detection in some of the more important of these conditions. This has at times brought to the medical directors new and complex problems, making it incumbent upon them, in order to meet these problems, to adopt more thorough and refined methods of selection. In doing this the life companies have taken advantage of the various mechanical and laboratory

aids to diagnosis in greater or less degree. Roentgen rays, fluoroscope, electrocardiograms, blood-sugar estimates, etc., are being used as a matter of routine in certain cases, and in many other cases as indicated by the facts brought out on the examination. While these mechanical aids are of great assistance and are giving much valuable information, they cannot supplant the information given by the examiner any more than they can take the place of bedside diagnosis in practice. The work of the examiner in his personal contact with the applicant will remain the basic and fundamental agency in selection, and is recognized as such.

Almost every physician engaged actively in the practice of medicine has at some time made examinations of applicants for life insurance as a part of his routine work, and with many of them a not inconsiderable part of their incomes have been derived from this source. But despite the extent and importance of this work both to the examiner and to the company engaging his services, despite the increased interest in life insurance medicine generally and the recognition by the medical profession of the prognostic value of the great mass of information gathered and classified by life companies, little or no systematic attempt has been made to educate the examiner in this special line of work, although there have been definite advances in all other selection agencies used by life companies. The question will naturally arise here, Why educate a physician in something that has been an essential part of his training during his study of medicine and of his daily routine after graduation? Is the completion of an examination of a life insurance applicant different from the examination of a patient for diagnosis? In reply it may be said that it is quite different in some respects, and that even though a physician may have had special training as a diagnostician, it does not follow that he will make a satisfactory life insurance examiner without special training along this line.

DEFICIENCIES IN LIFE INSURANCE EXAMINATIONS

We do not desire to make medical directors out of our examining staff, nor would it be proper or advisable to attempt to do so. However, the writer is more and more impressed with the fact that deficiencies in the value of examinations are not as a rule due to carelessness or lack of efficiency on the part of the examiner, but to a lack of knowledge on his part as to the requirements of life companies. Most physicians doing this class of work are striving to give good service to their companies and are eager for any information that will assist them in giving companies what they require. It is unreasonable to expect these men to make examinations which will always be satisfactory unless they have some understanding of at least the fundamentals of modern life underwriting. The unnecessary number of early death and disability claims and the large volume of correspondence necessary to complete exami-

nations in the cases of untrained examiners, as compared with the work of those who have received careful training, demonstrates without question the advantage that could be obtained by training examiners in life insurance medicine.

HISTORY OF MEDICAL EXAMINATIONS IN LIFE INSURANCE WORK

In the beginning of life insurance as an organized business there were no medical examiners and there was therefore no medical selection. The applicant was simply brought in person before an officer of the company with a letter of recommendation from some prominent person in the community, or at times with a letter from the family physician. The early practice is described in the "History and Constitution of the Equitable Society of London" as follows: "The regular employment of medical men to examine candidates for life insurance is a practice of comparatively recent date. The custom of the old offices prior to 1820 was for each life proposed to sign a very distinct and binding declaration to the effect that the individual had not had cow or smallpox, or any other disease tending to shorten life. The proposer had to give a reference to two persons of good repute. Parties who did not appear before the directors were required to give three references."

As time went on, certain medical questions would arise which puzzled the companies' officers, and as a result it became the custom to call on a physician to give information regarding these medical questions. This physician finally became known as medical adviser. As business increased, the time of the companies' officials became taken up with other duties and the selection of risks was gradually left to the medical advisers. These in time became medical examiners, and from this simple beginning there gradually evolved medical departments, medical directors and, finally, the highly organized selection machinery in life companies at the present time. After the development of the medical department, the selection of risks was left entirely to this source, and was based on the general prognostic agencies existent at the time and the personal experience of the medical director in his own company, augmented at intervals by investigations of individual companies to analyze their own experience.

SPECIALIZED MORTALITY INVESTIGATION OF 1903

In 1903 there was published the result of what was known as the Specialized Mortality Investigation. This was an investigation entered into by practically all old-line companies for the purpose of ascertaining the effect of minor impairments on risks which had been accepted as standard. This investigation was considered inadequate, and in 1907 the Association of Life Insurance Medical Directors appointed a committee to formulate plans for a thorough study of supposed medical impairments. In 1909 the Actuarial Society of

America also appointed a committee to extend the work of specialized investigation. These committees joined forces and proceeded with what was known as the Medico-Actuarial Investigation. About forty of the leading companies entered into and contributed data for this extensive research, these companies at that time having over 90 per cent of the business in force in all old-line companies. The material used by the committee was taken from the records of these companies, giving their experience over a period extending from 1885 to 1908, the data being submitted to a central bureau where it was studied and classified. Very detailed and extensive investigation was made and published on the effect of build on mortality, the effect of a large number of physical impairments, occupational hazards, habitat, etc. The information obtained was purposely arranged in such a way that any company could continue the investigation of any impairment through its own experience. This has been done in many instances, and has been carried out in greater detail by the individual companies.

Some idea of the magnitude of the investigation may be had when it is known that for the determination of the effect of build on mortality alone, data was taken from the records of 812,221 policies on the lives of men, covering more than five million years of exposure.

NEW RATING SYSTEM

After the completion of the Medico-Actuarial Investigation it was possible to adapt the information obtained therefrom in calculating the amount of premium necessary to take care of the additional mortality experienced as the result of almost any individual impairment, and it further encouraged the adoption of a new system of rating which had previously been suggested. This new rating system in effect gave a definite percentage value to the actual mortality resulting from any individual impairment as compared with the normal or expected. Because of this percentage or numerical value it was called the Numerical System of Rating,* and was adopted in its entirety by several of the leading companies, and has since been partly or wholly adopted by many others. It is the nearest approach to a scientific mortality estimation that we have yet had. It embraces many ramifications and fine gradations, and its successful application is based primarily on the assumption that the examiner will give to the medical director an exact picture of the applicant, as to any impairment found on examination or as to the history of any impairment.

CLASSIFICATION OF RISKS BY MEDICAL DIRECTORS

When the medical directors know that they have been given this picture complete, they can proceed without hesitation and without fear of error in assigning the case to the mortality class in which

it belongs, regardless of what impairment may be presented, if any. It can readily be seen that the examiner's function is one of great importance and responsibility, because unless there is previous information on file the medical directors proceed to take action, assuming that the examination report has given all information pertinent to the case.

HISTORY OBTAINED FROM THE APPLICANT

The material which the examiner uses in painting this picture is the history which he obtains from the applicant and the information obtained from his own personal examination of the applicant. Of these two, the latter is a comparatively simple matter, and the former a complex one in comparison. In making the physical examination the examiner is left entirely to his own devices and is not compelled to consume time in asking questions, waiting for the applicant's replies, etc. If properly trained in detecting and evaluating abnormal physical signs, and if alert (and he must be alert at all times) he can make a thorough and dependable examination in a short time.

History taking presents an entirely different problem; the examiner is not dependent upon himself alone, but must have or must be able to develop the coöperation of the applicant.

When an applicant is presented for examination the examiner should definitely adjust his mental attitude to the determination that, regardless of how favorable is his impression, he is going to carefully elicit the history and is going to make a thorough physical examination, always remembering the admonishment of one of the early medical directors that "a fair exterior may cloak much internal mischief." It is true that the majority of applicants are free from serious physical defects and will be frank and candid in their statements. It is equally true, however, that it is necessary to carefully examine the "ninety and nine" in order that the defects in the hundredth be not overlooked. It is necessary to make both parts of the examination specific and complete in each case. This is a *sine qua non* for the successful examiner. Any medical director will readily confirm the statement that thousands of dollars have been lost by life companies on account of perfunctory examinations.

REPORTING ON PHYSICAL FINDINGS

In reporting a physical finding, accuracy of diagnosis and description are, of course, necessary. The same requisites apply to reporting a history, but in addition it should always be borne in mind that in histories the time which has elapsed since arrest, recovery, or operation must be given and if possible the date should be given as to the month as well as to the year. The time element is a most important factor in classifying risks.

In taking the history the examiner must dominate the situation in a sympathetic but firm manner, and must not permit the applicant to do so. Statements carelessly or lightly made should not be accepted without careful investigation to

* The numerical rating system had previously been suggested by Dr. O. H. Rogers, then medical director, and Mr. Arthur Hunter, actuary, of the New York Life Insurance Company.

ascertain whether they presage a history that might have a definite bearing on the risk. The examiner must at all times have before him the fact that frequently he is getting only half the picture, and that to get the true picture often takes patience and finesse; but he will be well repaid by the many interesting histories that he will unfold from apparently insignificant statements, and by the certainty that these histories were developed as a result of his skill in history taking.

Permitting a history of one condition, which perhaps may be freely and fully given, to overshadow histories of other conditions which may exist, should be guarded against, and the history taking pursued as definitely as if no previous history had been developed.

A recent case may serve better to make this point clear. An examination was received on a man fifty-six years of age. The only history given was, "Eight months prior consulted physician account neuritis left shoulder and left arm. Cured." The only adverse feature on physical examination was blood pressure 154-96. The applicant was seen a second time for additional blood pressures and to develop more complete history of the neuritis. Upon further questioning it was ascertained that he had consulted his physician on account of neuritis, as stated, and had apparently been relieved of the condition. But it was also developed that two months later he had again consulted his physician, this time because of a definite and rather marked attack of vertigo, with two subsequent attacks, and his physician had found his systolic blood pressure running pretty constantly around 154. This additional information of course changed the entire complexion of the situation. A man with attacks of vertigo coming on at the age fifty-six, blood pressure running constantly above normal, and neuritis in left arm, would certainly be looked upon with suspicion. The original examination in this case was made by a man who is usually thorough in his work, and the additional history was given by the applicant without restraint. It was simply an instance where the examiner permitted himself to be guilty of a lapse of vigilance, and the applicant "let it go at that."

EXAMINATION BLANKS

The examination blank used by life companies should be looked upon as a means, not an end. It is impracticable to embody in one form all questions that would be necessary to bring out details of each impairment, and the questions on the blank are sent to the intelligent examiner as a guide to indicate the nature of the information required. Any questionnaire that can be devised is in one respect a dangerous instrument, because the questions may be answered in a more or less perfunctory manner and tell the truth, but not all the truth. Every experienced examiner has learned that he must depend on his own ingenuity to ask such additional questions as are necessary to develop true histories.

Frequently there are certain expressions used by the applicant and accepted by the examiner

which upon further investigation are very likely to be the portals through which we enter a trail of more serious conditions; such terms, for instance, as, "Have upset stomach occasionally like anyone else"; "Indigestion"; "Tonsillectomy"; "Consulted physician for general examination"; "Tired out from overwork"; "Nervous breakdown." These should not be accepted without careful investigation. We know that a persistent gastro-intestinal disturbance, even though mild in character, is frequently a reflex symptom of some serious condition, and sometimes is the only early symptom. Investigation of deaths from disease of the coronary arteries, for example, develops that frequently the only symptoms, either subjective or objective, had been a digestive disturbance, often vague and indefinite and frequently not appearing until a few months before death. Again, in gastric carcinoma it is found in the investigation of death claims that frequently there had been a long period of indefinite gastro-intestinal disturbance, with no apparent cause, and many times not considered sufficiently important to seek medical attention until symptoms from obstruction begin to supervene. Tonsillectomies in adults are more often done because of some constitutional rather than local trouble. While it is of course very desirable that people go to their physicians for general examinations as a matter of routine, in many cases this is done because of some specific complaint and not for the implied "routine check-up." Tired out from overwork and nervous breakdown are terms which may cover a wide range of conditions, from a simple temporary physical fatigue to a true neurasthenia, or possibly a mild pulmonary tubercular infection. Certainly, none of the foregoing expressions should be passed on to the medical directors without having been carefully investigated and explained. In addition to the usual interrogations, it should be ascertained whether a physician has been consulted, what his diagnosis was, whether gastro-intestinal series had been done, a chest picture, or electrocardiogram made, basal metabolism done, treatment received, etc. It would seem obvious that such questions should be asked as a matter of routine. The fact remains, however, that frequently they are not, and that many times examinations are sent in containing these expressions without any explanation whatever, and of course rendering it impossible for the medical directors to take action without writing to the examiner for further information.

PHYSICAL EXAMINATIONS

Scant reference has been made so far to the physical examination proper, the writer feeling that it would be an assumption on his part to attempt to give instruction in something which is elementary with every physician. There are certain features, however, in which the examination of the applicant differs from that of the patient, to which it might be of some advantage to make brief reference. When a patient goes to his physician there is a frank assumption that some im-

pairment exists. When the applicant is brought before an examiner there is usually an equally frank assumption that no impairment exists. The examination in the first instance is specific and in the second instance is distinctly general. In the latter case the mental attitude of the examiner is most important. When a healthy and vigorous looking subject is presented, even the experienced examiner is inclined to be influenced by his favorable appearance, and it is very easy to assume the attitude that only a casual examination is necessary. It is true, however, that we get some of our biggest surprises in such cases. The examination should, of course, be just as painstaking in these cases as in cases where the applicant's appearance or history would indicate the probability of some impairment. The examination should be made literally from head to feet. This can be done quickly if done systematically. Eyes should be examined to ascertain whether pupils react normally and whether there is evidence of exophthalmos; ears examined for indication of discharge, and whether any impairment of hearing exists; tongue, teeth, gums, tonsils, and pharynx inspected. (Where the examination is made outside of the office a vest-pocket flashlight will be found useful for illumination.) The neck should be inspected for thyroid enlargement, enlarged cervical glands, scars from cervical adenectomy or cervical abscess. It is not necessary to comment upon the examination of the lungs. It is well to know, however, that in classifying risks with heart impairments there are several important considerations. The classification varies according to whether there is history of rheumatism, a history of focal infection, the valve or valves affected, the degree of hypertrophy, and whether any suggested impairment of the heart muscle. The location and time of a murmur should be definitely stated, whether it is transmitted, and if so, in what direction; whether murmur or murmurs are heard in more than one location, and the position of maximum apex impulse. An examination of the heart should not be considered complete unless the applicant is exercised and heart is examined in reclining as well as upright position. This is particularly true in cases where heart sounds are suspicious but no definite diagnosis can be made, and in applicants past middle life. If there is doubt as to significance of physical signs, arrangement should be made to make a second examination on a different day.

In recording abnormal blood pressures, care should be taken where the blood pressure is above normal to ascertain, if possible, whether it may be due to emotional causes. There are, in a general way, two types of applicants who fall into this classification—the apprehensive nervous type, usually young adults, whose nervousness is obvious and is manifested by rapid heart action and, of course, a correspondingly high blood pressure; the other type, outwardly calm, with normal pulse rate, but also apprehensive to the extent that possibly some vasomotor constriction results. Frequently, after reassuring these applicants and

diverting their thoughts, the blood pressure will become normal. If it does not do so, these applicants, as well as those with abnormally high blood pressures not due to emotional causes, should be seen on a second and possibly a third day.

Most companies require additional specimens of urine to be examined in cases of albumin; likewise in sugar cases. In the latter it is their rule to request that a specimen be obtained after ingestion of some form of carbohydrate.

It should always be borne in mind that the life insurance examiner is called upon to find and record any existing impairments in a single and rather brief interview, which he would consider totally inadequate if he were seeing the subject as a patient, and out of fairness to his company he should not hesitate to arrange to see the applicant a second time if he is in doubt as to the significance of anything found on his examination.

CONCLUSION

It is by no means the purpose of this paper to criticize the ability or intent of any physician making life insurance examinations; on the contrary, the writer has for many years enjoyed the privilege of occupying an intermediate position between the home office medical department and the examiners in the field, and has the greatest respect and admiration for these men in their efforts to give their companies the best possible service. Many of them are in outlying communities far removed from their home offices and having little contact with them; but they are jealous of their franchises and loyal at all times to the trust imposed in them. However, it is necessary squarely to face the fact that, taken as a whole, life companies do not get the results from examinations that they should; that with the changing conditions affecting mortality it is becoming increasingly necessary to adopt more careful methods in the selection of risks; that one of the most important of these is dependable examinations; and that such examinations can only be had by careful selection and education of the examiners.

It is the tendency of life companies not only to be more careful in the selection of physicians who will be commissioned to make examinations, but to call on them for more thorough and efficient reports. The time is probably not far distant when a commission on the medical staff of a life company will be an assurance that the recipient has qualified as a specialist in life insurance medicine.

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DISCUSSION

HENRY W. GIBBONS, M. D. (Medical Director, California-Western States Life Insurance Company, Sacramento).—It is gratifying to see in print a paper on life insurance examinations which sets forth so clearly, concisely, and comprehensively the point of view of the medical director.

Considering the almost universal contact that physicians have at one time or another with life insurance companies, it would appear that such an educational article would have a wide appeal. However, I apprehend that the appeal is somewhat dulled by the prevailing impression that a life insurance examination is

a very cursory affair and that it does not call for very much professional acumen. On the contrary, to one who has made many insurance examinations it is just as intriguing and often requires more skill to determine that an individual is in reasonably normal physiologic balance as it does to find that he has some very obvious pathologic condition; and, further, where an examiner finds a pathologic condition it taxes his knowledge and skill to determine what effect such a condition is going to have on the future health and longevity of that individual. The art or science of "long distance" prognosis is only vaguely understood by the average clinician who follows a few individuals for a few years; whereas it is well understood in the aggregate by life insurance companies, which follow thousands of like individuals through a lifetime.

The clinician is not apt to be impressed by a slight defect in an apparently robust individual. A trace of albumin, a rapid pulse, a slightly elevated blood pressure, a little shortness of breath, or an "acid stomach" are symptoms which have caused no complaint on the part of the individual, but insurance statistics show that they are often the first slight manifestations of degenerative processes, which will ultimately lead to frank disease and to a curtailed longevity.

A definite diagnosis and description of a frankly morbid state found in an applicant is greatly desired by a medical director, but it is equally important that the examiner shall report and describe any abnormal finding, even though it has no apparent effect upon the present health of the subject.

Richard Cabot has said that if he were given the choice between a history and a physical examination in making a diagnosis, he would choose the history. Life insurance companies feel that way because they have found by experience that they can make a very good selection of young adults for small policies on a careful history alone, without any physical examination. As Doctor Dabney has stated, the medical blank cannot be all-inclusive; it can merely indicate to the examiner the lines to follow in making his examination. It relies upon the examiner's ingenuity to amplify the questions where needed and to wheedle out of a rather reluctant prospect all the pertinent facts in his medical history. The examiner must be astute enough to follow leads; a "nervous breakdown" may mean anything from a nervous headache to an active tuberculosis or a sojourn in an insane asylum. A few judicious questions will break down resistance and secure the facts.

The art of description is a wonderfully interesting thing. How often it is apparent that a good clinician has made a careful examination but has failed to convey his impressions or conclusions in his report. A few adjectives, dates, and terse statements will print a picture both definite and convincing. How many physicians would care to make a diagnosis or appraise the future health of a young man on unqualified statements such as these: "Small goiter, no symptoms," or "Gastric ulcer three years ago, no symptoms since"; yet these answers are all too frequently observed. We call them "monkey wrenches," because they interfere with the machinery of underwriting, cause correspondence, delay, and discontent.

At the present time "life insurance medical underwriting" is a specialized branch of medicine. It is dependent upon a knowledge of clinical medicine, of vital statistics, of life insurance statistics, and of actuarial science. Therefore the insurance company does not expect its examiner to be a specialist in this branch, but it does expect him, as a clinician, to give the company an accurate, careful and thorough history and physical status of the subject examined, so that definite underwriting principles may be applied to the individual case. This kind of service is being rendered by a large corps of regular, experienced examiners, but much unsatisfactory work is submitted by otherwise well-educated and well-equipped physicians who fail to appreciate the necessity of examining an apparently healthy individual with the same care and thor-

oughness that he would apply to a patient and who fails to appreciate the importance of reporting exact findings in a concise but comprehensive manner.

A study of Doctor Dabney's paper should give any educated and conscientious physician an insight into the point of view of the medical director and, if he is inclined toward examining work, should make him a satisfactory examiner.

✻

C. COLEMAN BERWICK, M. D. (Assistant Medical Director of the Metropolitan Life Insurance Company, San Francisco).—After reading Doctor Dabney's paper there certainly is very little left to be discussed. He has written his article with the greatest of care and thought, and I am sure the reader will finish the paper with a much better appreciation of just what life insurance companies desire most when an applicant is to be examined for insurance.

The subject of life insurance examinations should be of interest to both the medical examiner and the medical practitioner. There has long been a misunderstanding, which is more or less general among the medical profession, regarding what insurance companies term "hazards of previous illnesses." These hazards are constantly being reviewed by actuaries, with the entire life history available in the form of death and disability claims, and changes in the morbidity and mortality rates computed. Only by compiling many thousands of particular instances and rating the end-results can proper rates be reached. It is not generally understood by the medical profession how much of the so-called non-serious illnesses influence the aggregate morbidity and mortality. It takes a considerable period of time to draw off what the medico-actuaries call an "experience" on specific points in question. In order to arrive at a proper rating, the original examination blanks must be accurate and complete. It is for this reason that too much stress cannot be laid on the matter of history taking. A careful history, as the author so cleverly points out, is the most important part of the life insurance examination. Too often this past history is more or less hurried through by the examiner, who is too anxious to see what the applicant's examination reveals, thereby missing to a great extent the real purpose of the stereotyped form of examination blank.

Expediency and accuracy in completing examinations and any follow-up work required are of vital importance to the company in order that full justice may be done the applicant for life insurance. Knowing just what the company desires most, the examiner is in a far better position to serve the insurance company and at the same time not do an injustice to the applicant. For this reason insurance companies want well-trained medical men who maintain their contact with the trend of modern medicine and surgery.

The introduction into life insurance medicine of more or less complicated laboratory procedure and tests has been of necessity rather slow, awaiting the development of newer technique and more portable equipment for taking the specimens. These have been gradually added, one at a time, among them being blood pressure apparatus kidney function tests, blood sugar tests and, the latest, the Kline precipitation tests for syphilis.

The value of the roentgen-ray fluoroscope has been well demonstrated in the examination of an applicant's heart and lungs. Many applicants with a past history of pulmonary tuberculosis can now be safely insured with a proper rating, provided their fluoroscopic examination is favorable. Too often the first suggestion that an examiner gets about an applicant's old tuberculosis is the screen picture, especially in a case where the past history has been concealed or denied. It is well known even by the laity that too often the stethoscope does not reveal the true condition of the lungs even in the most experienced specialist's hands.

In closing, it should be said that the medical examiner is employed by the medical staff of the home office and is responsible to them alone for his work.

The doctor should not be allowed to be dictated to by the field or agency force. In reality, then, he is a home office representative and his reports should never be influenced by any outside pressure in the organization. The reports he makes out are the property of the company he represents, but should be confidential, even duplicating the confidence as between doctor and patient.

✽

W. W. BECKETT, M. D. (Medical Director and Vice-President of the Pacific Mutual Life Insurance Company of California, Los Angeles).—Knowing Dr. Dabney of San Francisco as intimately as I have for the past several years, I am not surprised that he gives us such an excellent paper on life insurance examinations. I know of no one who is better qualified to write authoritatively on this topic than is Doctor Dabney.

Doctor Dabney has well said in his paper that history taking is often a difficult problem. It will greatly assist the medical director in evaluating the insurability of the risk if the examiner will elicit, without prejudice, a full personal and family history from the applicant. If there be any confidential information which may be brought out by questioning the applicant that the examiner feels should not be written into the medical report but which is important for the company to know, it should be reported by the examiner in a separate communication to the company's medical director.

The examiner should inquire more fully than is indicated by the questions in the medical blank regarding environment, habits, and the use of alcoholic beverages. It is more difficult at this time to ascertain the amount of alcoholic spirits an applicant consumes than it was during the "prohibition" period. I believe, however, that the great majority of applicants will answer truthfully as to their drink habits.

Answers to all questions should be complete. It is not sufficient to say that the applicant has defective vision in one eye. We should know definitely whether or not we would have a blind man for a risk if the applicant should lose the sight of his good eye.

Answers to questions should not be relative. To say that a goiter is small does not fully convey to the medical director the size of the enlargement. "Small" might mean to the examiner what would be considered a very different size by the medical director. One of our most competent examiners once reported that a certain applicant had a small goiter which, upon examination in his presence, I found to be what I considered quite an enlargement of the gland.

After completing his medical blank the examiner should carefully inquire into any other condition which in his mind might in any way affect the insurability of the applicant. He holds a very vital position with the company, especially in evaluating disability insurance. Actuarial tables cannot accurately guide us in the selection of disability risks. This is distinctly a medical problem. It is necessary to weed out the neurotic and unstable individual who is applying for disability benefits, although he may be a good life insurance risk. An applicant who has regular "check-ups" usually does so because he has some real or imaginary trouble. Full details should be given in all of these cases as to the reason for these periodic examinations.

The importance of a close inspection of the applicant should not be overlooked; his general appearance as to complexion, gait, manner, and premature age, all of which may indicate much to the medical director.

The examiner should at all times realize that every case approved by an insurance company is an investment and much depends upon his report as to whether the risk will be profitable or unprofitable. He should also realize that the medical director only sees the risk through his report.

It is not necessary for me to make further comment regarding the physical examination, as Doctor Dabney has covered that feature of his paper so completely.

GALL-BLADDER AND DUCT DISEASES*

By HARLAN SHOEMAKER, M. D.
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DISCUSSION by Charles Eaton Phillips, M. D., Los Angeles; James L. Busby, M. D., Pasadena; Stanley H. Mentzer, M. D., San Francisco.

THE following is an analysis of 274 operations done for acute or chronic gall-bladder disease by thirty-two staff surgeons at the Los Angeles General County Hospital, Unit One, during the years 1929, 1930, and 1931. There were thirty-seven deaths. These 274 operations were performed by thirty-two surgeons on patients selected from 1186 admitted for acute or chronic cholecystitis. I shall present these case reports to you in three groups as follows: uncomplicated cases; complicated cases; errors in diagnosis. Then I shall break down the mortality statistics into a more simplified form. In my summary I shall suggest an analysis of the study of these cases with some remarks on the simpler functions of the liver.

UNCOMPLICATED CASES

Of the 237 cases in which no mortality occurred, 57 were male patients and 180 female. Following is a summary showing the number of patients and the decade of each sex.

Males—57	Females—180
Between 20 and 30..... 6	Between 20 and 30..... 36
Between 30 and 40..... 9	Between 30 and 40..... 63
Between 40 and 50.....10	Between 40 and 50..... 40
Between 50 and 60.....18	Between 50 and 60..... 31
Between 60 and 70.....12	Between 60 and 70..... 10
Between 70 and 80..... 2	
57	180

These age periods are quite comparable to those for similar statistics from any clinic. Women are afflicted with gall-bladder disease twenty years earlier than men, with a ratio of involvement three and one-half times that of men.

Twenty-eight of the 180 women had never been pregnant. The remaining 150 had an average of five pregnancies each. This, too, is quite in keeping with what has been ascertained from the gall-bladder statistics throughout the large clinics of the country.

In the analysis of these 237 operations the constitutional symptoms were not very marked. Only one-third had a temperature that was of any moment. The duration of pain ranged from a few hours to thirty years. You will at once realize some of the difficulties that are encountered in abstracting histories when one attempts to analyze pain of thirty years' duration, and separate it from all possibilities of any intercurrent infection that might have happened during that time. Jaundice either accompanied or preceded the attacks of 89 of the 237 cases. A great many of these histories, however, were very indefinite as to the presence or absence of jaundice.

* Read before the General Surgery Section of the California Medical Association at the sixty-first annual session, Pasadena, May 2-5, 1932.

The icterus index was taken on 73 of the 237 patients, and was positive in the following ratio, serum bilirubin present:

	Patients
Index less than 10	16
Index 10 to 20.....	22
Index more than 20	35

X-ray pictures were taken on 133 patients out of the 237. These plates showed gall-bladder pathology or stones in ninety-four patients. There were eleven who gave positive Wassermanns, and three gave a suspicious reaction in this series.

The anesthetic of choice was ether, and was given alone 182 times; ether and gas were given thirteen times; local anesthesia and gas twice; sodium amytal and gas were given once; sodium amytal and ether nine times; sodium amytal, gas, and ether once; spinal novocain in twenty-seven patients; spinal novocain and ether once; and spinal novocain and amytal once.

Preference of anesthetics is reflected by the year in which choice was made. In 1929, no spinal anesthesia or amytal was given. In 1930, sodium amytal in conjunction with ether and gas was used seven times; spinal novocain was used but once; whereas in 1931, spinal anesthetic was used twenty-seven times; sodium amytal and ether, four times; sodium amytal and spinal, once; spinal and ether, once; and local, novocain and nitrous oxid once.

There were 202 cholecystectomies done, and thirty-three cholecystostomies. Additional operations performed at the same time, almost exclusively with the cholecystectomies, were:

- 66 appendectomies
- 3 posterior gastro-enterostomies
- 1 cholecystoduodenostomy
- 1 partial gastrectomy
- 2 perineorrhaphies
- 1 hernia repair
- 1 removal of umbilical hernia
- 1 cervix cauterization
- 1 ligation of tubes

The average bed stay in the hospital was approximately twenty-one days. For the most part, recoveries were uneventful, with the exception of a few patients who had a stormy convalescence, one remaining in the hospital eighty days following his operation.

Follow-up letters were sent to these patients several months after they left the hospital, and the end-results were reported as follows:

No reports from sixty-eight patients.

Successful operation reported by 119 patients.

Operation not entirely successful reported by forty-one patients.

Postoperative symptoms in eight patients.

Metastatic malignancy in one patient who had had a cholecystoduodenostomy. This patient had not succumbed to his disease at the time these statistics were compiled.

Some of the unusual occurrences in this uncomplicated series was the presence of a rather pronounced leukocytosis, running 16,000 to 25,000 in patients in whom the temperature was normal and in whom there was no jaundice. Of the 237

patients without mortality recorded, there were 154 patients with temperature reading, a white blood count, and report of pathologic findings. These 154 patients exhibited pathologic changes showing either a chronic gall-bladder or a chronic gall-bladder with stones. One hundred and seven of these patients were afebrile upon admission and forty-seven of the afebrile patients exhibited leukocytosis ranging from 10,000 to 25,000; one was as high as 30,000. There were sixty-one patients who had no leukocytosis.

In contrast with the afebrile cases, those patients reported with a temperature ranging from 100 degrees and up, thirty-four patients showed a leukocyte count up to 30,000, and twelve showed no leukocytosis at all. The evaluation of the leukocytic count in gall-bladder disease in this series of cases is a little more than 40 per cent positive with temperature under 99 degrees, and 60 per cent positive with temperature over 100 degrees.

Presence of bilirubin in the blood serum was noted in only seventy-three patients in the serum of 237 operations. Although the presence of bilirubin has some bearing on the end-results, on the function of the liver, and a high icterus index, and on the possibility that the patient may not tolerate an operation well, we are of the opinion that the cases recorded are too few to permit accurate statement that the presence of bilirubin is of any prognostic importance in determining the operability of the patient.

The location of the pain was quite consistently given as in the right upper quadrant. Failure to accurately describe the type of pain, its character and location, and the constant use of the initials "R. U. Q." leads one to the impression that a bad habit may have been formed by the use of these letters, rather than an accurate description of their real meaning. The same might be said of the term "chronic cholecystitis." This term was used so frequently throughout this series of cases that it actually appeared as the sole cause of death in one of the fatal cases.

Stones in the gall-bladder were present in 144 patients, and were found in the common duct in six patients.

Nonprotein nitrogen taken in twenty-eight patients varied from 20 to 44. As there was no mortality among these 237 patients, the effects of the estimated nonprotein nitrogen on the after-results cannot be ascertained.

COMPLICATED CASES

There were thirty-seven cases in which death finally ensued. They were associated with clinical symptoms of deep jaundice, great pain, and occasionally the presence of tumor. Six of these proved to be malignant. There were twenty males and seventeen females, and their age periods were as follows:

Males—20	Females—17
Between 20 and 30 yrs.....0	Between 20 and 30 yrs.....1
Between 30 and 40 yrs.....2	Between 30 and 40 yrs.....3
Between 40 and 50 yrs.....5	Between 40 and 50 yrs.....2
Between 50 and 60 yrs.....6	Between 50 and 60 yrs.....5
Between 60 and 70 yrs.....5	Between 60 and 70 yrs.....4
Between 70 and 80 yrs.....2	Between 70 and 80 yrs.....2

For the most part, these patients were acutely ill on admission to the hospital, and some ran very high temperatures. Jaundice was present in twenty-one patients, and absent in sixteen. The Wassermann was positive in one patient, negative in thirty, and was not stated in six. Duration of the disease ranged from one day to thirty years. One patient was demented, and the historian was unable to ascertain the duration of the disease. The pain in most instances was localized in the right upper quadrant, radiating to the back, and frequently all over the abdomen.

One proved to be a spirochetal infectious jaundice, which Dr. Howard A. Ball states was undoubtedly a case of Weil's disease, and is one of a dozen or so proved to have originated in North America. The patient had worked in an old-rag factory. The leptospira is a type of spirochete that is frequently found in the blood of rats.

Laboratory findings showed the presence of bilirubin in the blood serum to be:

- 1 to 10 in one patient
- 10 to 20 in five patients
- 20 to 30 in three patients
- 30 to 40 in two patients
- 40 to 100 in one patient
- Over 100 in three patients

X-rays were taken in fifteen of the thirty-seven patients, and were positive for stones or gall-bladder pathology in seven, and negative in eight.

An estimate of the nonprotein nitrogen was made in twelve of the thirty-seven patients in this group. In six patients the nonprotein nitrogen was normal, and in six it ranged from 55 to 200. The latter and highest reading was about the only symptom present in the patient. The Van den Bergh test was done fourteen times; was direct once; direct positive fourteen times, and indirect positive thirteen times. It is suggestive that only in one instance was this reaction diagnostic for the obstruction of the bile duct. It could hardly be deduced from these results that the test was worth the time and trouble necessary to make it.

With regard to anesthetics: Ether was used for twenty-five patients; spinal for three; local for two; local and spinal for one; ethelene for one; nitrous oxid gas for three; amytal and nitrous oxid gas for one; and paravertebral for one. The ethelene gas was used as anesthetic upon a patient who was seventy-eight years of age. He presented a large tumor in the region of the gall-bladder and was in such precarious condition that operation seemed possible only under a very light anesthetic. Ethelene gas is not used in the General Hospital except in the obstetrical department, so the operation was performed in that department much to the consternation of the obstetricians, who apparently anticipated that a whole series of septic labors would follow the operation, as a stone had perforated the gall-bladder. The patient survived the operation, and gained nine and one-half pounds in weight. He left the hospital on the sixteenth postoperative day, only to return four months later and die with a malignant involvement of the head of the pancreas. This metastasis

was most unusual, the tendency being to metastasize to the liver from a carcinomatous infection of the gall-bladder, rather than to the pancreas. The autopsy demonstrated a malignant cyst in the head of the pancreas. This patient might have made as good recovery from any other type of anesthesia, but it is my impression that he did very well with ethelene.

The pathology that existed in these thirty-seven cases was most varied. Two patients died of acute ulcerative cholecystitis; one of appendicitis; two of abscesses of the liver. (Both with abscess of the liver had stones in the gall-bladder.) One died from a biliary fistula; two of chronic cholecystitis.

The case of biliary fistula was a most interesting one, and illustrated a type of case that Dr. Waltmann Walters has discussed at length in several papers. The patient drained bile externally, but the entire surface of the liver from its dome to the subhepatic fossa was laked with bile. These bile lakes did not drain one into the other, but were walled off with barriers of lymph. The patient showed a marked tendency to lose weight, due apparently to his inability to digest food or any desire to take food. With the loss of weight and strength, the patient eventually succumbed to a secondary anemia, simulating a pernicious anemia. Although this particular type is quite rare, an interesting point is the long postoperative morbidity. Walters reports that some of these biliary fistulae have drained for a year before that little spark of resistance that leads to the restoration of health restored the patient to health.

The diagnosis "chronic cholecystitis" and "cholelithiasis," I consider very vague, as twenty of the thirty-seven patients had stones, and any or all of them could be said to have been affected with chronic cholecystitis.

Cirrhosis of the liver is given as the cause of death in one instance. This patient ultimately expired with a cerebral accident.

There was carcinoma of the gall-bladder in two cases, and carcinoma of the head of the pancreas in four. Dilatation of the stomach was given as a cause of death, and gangrene of the gall-bladder in two patients, one of whom was complicated by a thrombosis of the popliteal artery.

Empyema of the gall-bladder is given as the cause of death in four cases, and intestinal obstruction in one. This patient had been previously operated on for volvulus and had been relieved of the obstruction. During the second attack of the volvulus nine months later, the operator, unfortunately for the statistics, attacked the hydrops of the gall-bladder. The patient expired with intestinal obstruction due to a recurrence of a volvulus of the colon.

Myocarditis was a contributing and the terminal reaction in six of these patients. Obesity and pregnancy in one, and pneumonia in eight, toxemia in two, uremia in one, and ileus in one. Syphilis was a contributing factor in one death.

There were nineteen cholecystectomies performed; eighteen cholecystostomies. With the

cholecystectomies, the following operations were performed:

- 1 resection of the liver
- 4 appendectomies
- 4 stones in the common duct, removed
- 1 volvulus
- 1 gastric ulcer operation
- 4 cholecystoduodenostomies
- 1 gastro-enterostomy
- 2 drainage of abscessed liver
- 1 kidney stone (nephrolithiasis)

Again I note that no additional surgery was attempted when a simple drainage was done.

ERRORS IN DIAGNOSIS

Autopsies were done in twelve of thirty-seven mortalities. These autopsies revealed that a stone in the common duct had been overlooked, which statistics from the various clinics show to be the cause of five per cent of the postoperative deaths, but in this series there was but one such occurrence.

There was a four months' pregnancy associated with a bilateral pyelonephritis in which a urinalysis prior to the operation showed no pus. The postoperative course was exceedingly stormy, and death most probably occurred from the toxemia of the pregnancy. This patient was twenty-six years of age.

Autopsy also revealed a case of Weil's disease (which I mentioned earlier in this paper), a leptospira type of spirochetal infection of the liver. There was complete adhesion of the gall-bladder to all the surrounding tissue. On account of the poor condition of the patient an empyema of the gall-bladder was drained.

Gall-bladder surgery in the case of a demented patient was not successful in this series. It is my impression that thyroid surgery is much more successful in this type of patient; there is always the possibility of a cure.

In the thirty-seven operations in this series there were no adhesions in fourteen cases, giving the operator a fair field in which to work. In twenty-three of the cases the adhesions varied in denseness from a filmy exudate to the most organized indurations. In one case in particular, the fundus of the gall-bladder had adhered to the costal margin of the rib, and the respiratory rhythm had all but dragged the gall-bladder out of its fossa.

As to the preoperative course: sixteen of these patients were hospitalized one week or more prior to operation, and twenty-one for slightly less than seven days.

As to the postoperative course: twenty-four lived more than one week, while thirteen lived less than seven days. Of the twenty-four that lived more than one week, eight lived two weeks; three, three weeks; five lived four weeks; five lived five weeks, and three lived four months. The last mentioned were all patients with carcinoma, carcinoma of the pancreas and gall-bladder.

COMMENT

The writer appreciates that this series of cases (both the 237 that comprise the uncomplicated

group and the thirty-seven that comprise the mortality series) does not furnish a complete study of most of these patients. Study of the liver function tests have not been completed in many of these cases. Statistics do not exist that might make a comparison of the function of the pancreas and the liver of some moment. In the entire series the sugar-tolerance test was done only twice. The series shows death resulting from carcinoma of the pancreas four times. Whether a carcinoma of the head of the pancreas would alter the sugar tolerance of the human body, I am unable to state.

In one patient some eighteen separate laboratory procedures were done prior to her fourth operation. This patient was very obese. She was operated upon for appendicitis. There followed an incisional hernia. The patient reentered the hospital, and the incisional hernia was repaired. Pain and discomfort were not relieved. The patient was then sent to the metabolic clinic, as she was five feet two inches tall and weighed 235 pounds. After five months of treatment in the metabolic clinic, the patient weighed 265 pounds. Her gall-bladder was drained. The wound healed and she was discharged, only to reenter the hospital the fourth time. A cholecystectomy was done, and the patient died on the third postoperative day. The cause of death was a dynamic ileus, proved by autopsy. The patient was so stout that this diagnosis could not have been made by any other means.

No alibi need be offered for the cause of death in this group of thirty-seven, nor for inability to classify them other than as individual cases. The laboratory findings and technique have not been so satisfactory as has clinical experience, nor so great an aid in deciding when these cases should be attacked surgically or when they should be treated expectantly until a more favorable time for operation should be reached.

You will recall that sixteen of the thirty-seven were in the hospital for one week or more before operative procedures were attempted. On the other hand, of the twenty-one that were in the hospital less than seven days, the question uppermost in the operator's mind must have been: Is this a ruptured gall-bladder with peritonitis? Being unable to determine that question by any means save operation, one is not surprised that a great many of these cases were operated upon immediately following their admission at the hospital. The ultimate result as to the time of death following the operation, whether patients were in the hospital for a week or for a day, was about equal. You will recall that thirteen lived less than seven days and twenty-four lived from seven days to four months.

However, in a series of cases in which the pathology was not so evident it would be of great satisfaction indeed to test some of the functions of the liver in relation to the pathologic process at hand. Of the multitudinous functions of the liver, we might single out four of the most important: first, storage of glycogen, to protect the level

of blood sugar; second, the faculty of deammizing the amino-acids, converting them into urea and creatinin; third, the power to destroy the uric acid; and fourth, the function of excretion of bile and bile pigment. Therefore, if we had (prior to our operation and in conjunction with our x-rays and any dye tests available) a sugar-tolerance test and a nonprotein nitrogen test, and a test to ascertain the bilirubin in the blood serum in a series of 274 cases with thirty-seven deaths, some conclusions might be drawn as to the relative merits or demerits of these laboratory procedures.

SUMMARY

No attempt has been made to criticize any of the procedures in this series of cases. Thirty-two surgeons have operated upon 274 cases with thirty-seven deaths. It is true, therefore, that 237 patients were discharged from the hospital, as previously mentioned in the paper. These facts have been presented so that surgeons might draw their own conclusions as to whether the patient should choose an early operation with a low percentage of mortality, or should wait until a later age period when time and stress have converted the pathologic condition into one that is nearly inoperable.

1930 Wilshire Boulevard.

DISCUSSION

CHARLES EATON PHILLIPS, M. D. (706 Pacific Mutual Building, Los Angeles).—A review of 274 operations for the relief of diseases of the gall-bladder and bile ducts brings out many points of interest. A comprehensive knowledge of results is essential to the best work. This must include a familiarity with the successful but critical study of the failures. To show the value of statistical studies, in 1923 I presented a paper before a meeting of the American College of Surgeons on the subject, "Statistical Studies and Medical Efficiency." It was brought out in that paper that in appendicitis in the vomiting state there is an average mortality rate of over 15 per cent, while in the hands of competent surgeons the mortality rate does not exceed one and one-half per cent. This shows a needless loss of life of over 13 per cent in appendicitis alone. While the exact figures are not available, the discrepancy in mortality rate between average and good operators in gall-bladder surgery is greater. Doctor Willis of Richmond showed us that the mortality in appendicitis had increased 31 per cent, while the mortality rate in gall-bladder surgery that increased 77 per cent during the same time. This condition has come about because neither the patient nor the doctor knows the risk that is being taken.

The author's classification into complicated and uncomplicated is novel. It might have been clearer and to the same effect if he had classified them into (a) "those that lived" and (b) "those that died." It is too much to ask us to believe that all the good risks recovered and that all the complicated cases died. If such is really the case, we should not operate on complicated cases.

The paper brings out the information that multiple operations are hazardous. It is more than a coincidence that of the nineteen cholecystectomy patients who died, all had had additional operations performed at the time the gall-bladders were taken out.

Again we are struck by the relative worthlessness of the icteric index. The roentgen ray helped but little in a diagnostic or prognostic way. The leukocyte count as well as the blood chemistries were of little value.

The paper brings home to us the relative insufficiency of many of our most valued signs and laboratory tests.

In conclusion, we are struck by the idea that operations on the gall-bladder and bile ducts present one of the most difficult fields of surgery. The increasing mortality rate shows it is becoming more and more invaded by the occasional and incompetent operator. A study of this paper has brought home to us in a forcible manner the difficulties and dangers of surgery of the gall-bladder and ducts. It has shown us the fallacy of our favorite tests. It has shown that the multiple operations performed at the time of gall-bladder and bile duct surgery should be relegated to a place still lower than that occupied by the shotgun prescription because its results are far more deadly. We are deeply indebted to Doctor Shoemaker for this review. Its careful study should make us better surgeons.

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JAMES L. BUSBY, M. D. (595 East Colorado Street, Pasadena).—Doctor Shoemaker is to be commended for his clear and unbiased presentation of this group of cases. It emphasizes the importance of every study possible to determine the functional status of the liver and, in jaundiced cases, the kidney. Unfortunately we have at our disposal very few conclusive tests for liver function.

It has been our experience, however, that in jaundiced cases the determination of the serum bilirubin has been of distinct value in the selection of the proper time for surgery. A rising curve of serum bilirubin would suggest immediate surgery. However, a falling curve would tempt one to delay surgery until the patient becomes a better operative risk.

Snell has pointed out that an acutely jaundiced experimental animal is far more vulnerable than one in which jaundice has extended for some period. However, one cannot delay to the point of extensive liver damage.

Probably the three major complications affecting successful surgery are: (1) hepatic insufficiency; (2) renal insufficiency; and (3) hemorrhage. The first two, and possibly the third, are best combated by the free use of glucose intravenously.

Hirshfelder has also recently shown the value of concentrated glucose solutions in the elevation of the blood calcium levels and the reduction in the coagulation time. These studies, supported by the experimental work of Mann and Bollman in partially dehepated animals, would lead to the conclusion that glucose probably is one of the most valuable preoperative and postoperative medical aids to the patient with complicated cholecystic disease.

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STANLEY H. MENTZER, M. D. (450 Sutter Street, San Francisco).—Doctor Shoemaker has presented a very interesting summary of a large series of patients operated upon for gall-bladder disease. His paper offers many opportunities for discussion of the pertinent data. I am particularly interested, however, in the instances of acute cholecystitis, for Doctor Shoemaker's paper verifies the facts which I have elicited from a study of forty-three patients who had perforations, gangrenes, or advanced acute empyemata of the gall-bladder clinically unrecognized.

It will be noted that Doctor Shoemaker presents an operative mortality of 13.5 per cent. When interpreted in terms of pathology, it is evident that the mortality in uncomplicated cases has been virtually nil. However, advanced pathology increased the operative mortality greatly. Therefore, statistical studies for the purpose of evaluating mortality figures should be presented only in terms of the stage and type of the cholecystic disease.

Doctor Shoemaker has noted a leukocytosis from sixteen to twenty-five thousand in patients with normal temperatures, while other patients with advanced lesions had normal leukocyte counts. Some patients had a moderately high temperature with a normal

white count. From these records and from the variations in the histories and physical findings, the author states that he was unable to determine clinically whether the gall-bladder had ruptured or not in sixteen cases. This has been my own experience also, for in forty-three advanced acute gall-bladder lesions, perforation occurred four times, gangrene once, and advanced acute empyema in four instances without recognition by the medical attendant. Moreover, surgeons awaiting subsidence and localization of inflammation in many acute cases were unable to determine when perforation had occurred instead.

Studies of this sort compel physicians to resort to earlier surgery in the future in order to avoid the serious complications of delayed surgery with its inevitably high mortality. This fact is emphasized by Doctor Shoemaker and warrants the most careful consideration by our medical confrères.

ECZEMA—PRESENT DAY CONCEPTS*

By ERNEST DWIGHT CHIPMAN, M. D.
San Francisco

DISCUSSION by Howard Morrow, M. D., San Francisco; H. J. Templeton, M. D., Oakland; Kendal Frost, M. D., Los Angeles.

IT is interesting to observe that since the first mention of eczema in dermatologic writings the idea of predisposition has almost constantly appeared.

Rayer and Devergie thought of eczema as a chronic dermatosis dependent upon some unknown predisposition. For Hardy this predisposition was the expression of a diathesis. According to Hebra, eczema occurred because of a vulnerability or pre-existing diseased state. Unna attempted to include all eczemas under the single title "microbic."

In his earlier writings Brocq differentiated between the "true" and the "complex" eczemas, but in his *Traité*, published in 1907, he included both of these under the title "Cutaneous Reactions." This was a definite step forward.

As a text for our discussion of present-day concepts of eczemas let us take the following observation of Darier:¹ "If one presents to a dermatologist an eruption, or better still, a good histologic section, he will not hesitate to state whether or not it is a case of eczema. If on the contrary one asks him of what eczema consists and in what manner the manifestations which characterize it are born, one will have opened the door to a dissertation full of discriminations and reservations."

DEFINITION OF ECZEMA

This brings squarely before us the question of a definition and leads to a discussion of the etiology and pathogenesis of eczema. Probably the greatest source of confusion is the fact that many writers start with differing premises. It will clarify any discussion of eczema to be in agreement as to a definition.

Just a quarter of a century ago Brocq² defined eczema as follows: "We designate under the name 'eczema,' an inflammatory dermatosis objectively characterized: (1) by redness, which sometimes

is entirely wanting at the outset; (2) especially by a vesiculation of special aspect, more or less accentuated, the vesicles nearly always clearly perceptible, well formed, of the average size of the head of a needle, more rarely the size of a pin-head, sometimes less well developed and then appreciable because of the appearance of a fine round crust; (3) often, but not always, by an effusion of yellowish serum which is sticky to the touch and which has the property of staining linen; (4) and according to the degree of the inflammatory reaction and exudation, by consecutive scales and crusts."

A decade ago Highman³ contributed the following: "Eczema is a catarrh of the skin possessing the pathologic characteristics of an exudative inflammation. It is characterized clinically by redness, swelling, the presence of papules, vesicles, pustules, weeping, crusting and scaling in various combinations. In its course it may be acute, sub-acute, chronic; and its origin depends upon an interplay between various known and unknown local and predisposing causes to which the skin lesions are reactions."

In a recent article Stokes⁴ declares: "The day should now be passing . . . when one can feel that all reasonable demands have been satisfied by a mere description of appearances, without reference to what Clark Maxwell called the 'particular go' of the phenomenon." He then defines eczema as "a persistent dermatitis in which the predisposing causes or background outweigh the immediate causes." He chooses this in preference to a widely held German view that "Eczema is a form of dermatitis which results from an intrinsic quality of hypersensitiveness in the epidermis itself." The use of this definition by Stokes is "based on the view that all inflammations of the skin exhibit a complex rather than a simple etiology."

Possibly one should not feel that mere description of appearances is enough, but one may reasonably require some semblance of a picture of a process as a basis for its discussion. The expression "a persistent dermatitis in which the predisposing causes or background outweigh the immediate causes" will fit dermatitis herpetiformis as well as eczema. The definition omits all mention of spongiosis, vesiculation, or the essential elements which make up the picture of eczema as commonly contemplated. It seems to project the discussion at once into the realm of etiology and pathogenesis without making us at all sure that we are on common ground.

Nevertheless Stokes has presented in particularly satisfying form an etiologic analysis which helps in the formation of a concept to which reference will presently be made.

DERMATITIS AND ECZEMA

For many, apparently, any dermatitis is an eczema. Now, while every eczema is a dermatitis there are still many who believe that not every dermatitis is an eczema. Jadassohn,⁵ for example, asserts that if one wishes to maintain a concept eczema it is necessary to discard the microbic and

* Read before the Dermatology and Syphilology Section of the California Medical Association at the sixty-first annual session, Pasadena, May 2-5, 1932.

mycotic forms as well as the so-called seborrheic eczema and neurodermatitis. Darier apparently regards neurodermatitis as an eczema. In this connection Pusey⁶ states that "while we all agree that eczema and dermatitis are identical . . . we are still influenced by tenacious, if unconscious, reservations that eczema is set apart from dermatitis by certain characteristics, however intangible."

There are some who differentiate sharply between artificial dermatitis and eczema of internal origin. Both Brocq of the French school and Oppenheim of Vienna have enumerated clinical differences such, for example, as the size of the vesicles. Bruno Bloch,⁷ on the other hand, maintains that there is not a single objective sign which justifies such a division and cites experimental sensitization to the primrose of normal persons who have never suffered from eczema or any metabolic disturbance.

Darier⁸ would retain the name "eczema" for those cases of prolonged evolution and unknown but probably internal cause. For him eczema is a "process" which he terms a "reaction of intolerance," taking the stand that the simple term "reaction" represents what may result in anybody regardless of predisposition; that it may be of toxic origin, in which case the reaction is proportionate to the dosage; while the term "reaction of intolerance" connotes a quality in virtue of which an individual will react to substances which in normal subjects will do no harm.

Sabouraud⁹ contends that all the forms of dermatitis of which we know the cause should be named by the cause and separated from eczema. When we know all, there will be no eczema. He defines eczema as "all the vesicular and oozing epidermites of unknown cause." Probably this is the concept best calculated to bring order out of confusion and corresponds most closely to what has been the general American view for some years.

ETIOLOGY AND PATHOGENESIS

When we approach the question of etiology and pathogenesis we find several distinct viewpoints. On the one hand is a group which believes that the essential etiologic factor lies in the intimate reactions of the epidermis itself. This group tends to make all eczemas allergic in nature. Others hold the opinion, emphasized by Stokes, that all inflammations of the skin exhibit a complex rather than a simple etiology. For Stokes dermatitis is the result of an interplay of various factors running the gamut of dry skin, oily skin, vulnerability through familial trait, pyogenic, mycotic, allergic, neurotic, metabolic, and diathetic factors and the influence of focal infection.

Bruno Bloch¹⁰ decries the attempt to make eczema the result of metabolic disturbance. He says: "The theoretical basis from which this point of view developed, namely, the old doctrine of the Middle Ages concerning 'dyscratic' conditions, has long since been abandoned as obsolete. . . . There is not the least evidence of the existence of a metabolic disturbance which is common to all or to many types of eczema and which is pathognomonic for this condition of the skin."

Milian¹¹ frankly avers that eczema is due primarily to alteration of the sympathetic nervous system and he sees no more reason to call the exciting causes antigens than to call the pneumococcus of pneumonia an antigen even though it serves to manufacture the antibodies which bring about the cure.

If there is, however, one definite trend in present-day consideration of eczema, it is to consider the reaction allergic in nature.

Pusey¹² apparently believes that the pathologic X has been found in the phenomenon of allergy, but he realizes that it is not known just what happens in the body as a whole or in the skin itself to cause the allergic state in one out of many individuals.

Gray¹³ of London thinks the term "allergic eczema" does not advance matters much, for most authorities consider all eczematous reactions to be "allergic." He says: "We do not really know what happens when an irritant is applied to the skin; we know the histological changes produced, but we do not know what chemical and physical changes occur in the cells of the epidermis."

Darier¹⁴ states that since all dermatitis is allergic the use of the term "allergic dermatitis" is a pleonasm.

Klauder and Brown¹⁵ have produced experimental data to suggest that the autonomic nervous system is concerned in altering cutaneous irritability through a disturbance of the calcium-potassium ratio.

Rost¹⁶ attempts the dissociation of eczema into two groups. Those of external cause are called dermatitis and those of internal cause are called dermatopathies. The latter are connected with such general conditions as scrofula, diabetes, nerve disorders, etc., and the lesions are called eczematoid. Darier objects to this point of view because, recognizing the complexity and habitual interplay of the causes of eczematous eruptions, the importance attributed to one or another is a matter of personal appreciation and cannot serve as a principle of classification.

The wide range of these etiologic factors would at first glance seem to make it impossible for one to formulate a concept to which all can subscribe. But many of the differences are perhaps more apparent than real. The situation may be clarified to some extent by granting that eczema is due either to trouble in the epidermis itself, or that it results from an interplay between various known local and predisposing causes, or both. In any case the precise mechanism of the process is undetermined. We have seen the cure of eczema following the removal of infectious foci, but we cannot say that there was not elaborated in these foci some substance to which the epidermis was sensitized. We have also seen eczema disappear upon the removal of adverse emotional factors. On the other hand, we have seen inflammatory reactions as a result of contact with substances which in a large majority of individuals would cause no disturbance and in subjects in whom no metabolic, neurogenous or infectious factors were to

he found. Each holds a certain amount of truth. Stokes has reconciled the two views by his concept of a complex in which the intrinsic or allergic factor is recognized as one of a dozen etiologic elements.

SUMMARY

In this review of current opinion we find, as might be expected, both agreement and disagreement. Upon two points there is practical concord. First, eczema is to be regarded not as a disease but as a syndrome. Second, the *sine qua non* of eczema is a predisposition.

For the majority, this predisposition is a state of allergy, but there is an opposing opinion that would stress the general background rather than an intrinsic susceptibility of the epidermis.

Definitions of eczema show great differences in phraseology, but the opinion may be ventured that a majority of dermatologists will accept as a suitable working basis the simple statement of Sabouraud that eczema is an oozing or vesicular epidermatitis of unknown cause.

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DISCUSSION

HOWARD MORROW, M. D. (384 Post Street, San Francisco).—As time goes on we see fewer cases of eczema and more of diseases which were once classed as eczema. Vesicular dermatophytosis has removed a large percentage of cases from the old vesicular eczema group. The old type of eczema of the groins is nearly always caused by ringworm fungus. The "eczema" under the mammae in fat persons is caused by tinea or monilia or is a seborrheide. The term "eczema" should not be used for such cases. We still have the nummular or neurotic eczema of the extremities which usually clears under appropriate local treat-

ment. Flexural eczema or the prurigo of Besnier is the rebellious type which occasionally baffles the dermatologist and the endocrinologist. It is advisable to exclude the common skin diseases before advising skin tests for protein sensitization or starting treatment for an eczema, as many of these cases on careful examination turn out to be scabies or dermatophytosis.

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H. J. TEMPLETON, M. D. (3115 Webster Street, Oakland).—As Stokes has pointed out, eczema may be regarded as a reaction of the skin resulting from the interaction of noxious stimuli either endogenous or exogenous. The sum total of this interaction equals eczema. A threshold exists in all patients below which the sum total will produce no reaction; but when this threshold is exceeded eczema occurs. According to this concept it is easy to understand how a disturbance of the equilibrium by any such factor as focal infection, allergy, emotional upset or external irritants may precipitate an acute attack.

From the standpoint of industrial dermatology, Bloch's experiments are interesting. He sensitized guinea-pigs to primrose by rubbing the leaves onto their skins. After each resultant attack of dermatitis the skin would gradually return to normal. But with each repetition of the chemical insult the period of recovery would be slightly prolonged until a time would come when the eruption would persist, even though no more primrose were applied. Basing their opinions upon such experimental data, some dermatologists have considered the more acute eruptions which would disappear upon removal of the offending irritant as "dermatitis"; and have applied the term "eczema" to those resistant instances in which repeated applications of the irritant have so altered the reactive quality of the skin as to render it incapable of restoring itself to the normal after the irritant had been removed.

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KENDAL FROST, M. D. (1930 Wilshire Boulevard, Los Angeles).—Discussions of this character are most valuable. An occasional attempt to "take stock" helps to evaluate any subject and to relegate new aspects to their proper places in the conception of the whole. The term "allergy" has been used loosely, almost synonymously with "eczema." However, on close analysis it means the phenomena covered by the terms "idiosyncrasy," "hypersensitivity," and essentially "altered sensitivity," all of which were common to eczema, even before the term was coined. Research in biologic reactions has broadened our knowledge of this subject, but has not particularly changed the conception of eczema nor clarified it. It still remains, as Doctor Chipman points out, a syndrome and not a disease, in which usually multiple factors act and produce the clinical picture.

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DOCTOR CHIPMAN (Closing).—The essential factor in the production of eczema is an unknown quantity in virtue of which certain individuals react to influences which have no effect upon the majority of people. As Doctor Frost indicates, this is only another way of saying that there is an altered reaction or an allergic state. Whether we call it predisposition, a reaction of intolerance or hypersensitivity is of no special moment.

One may base a concept of eczema upon grounds of morphology, nosology, or biology. Few remain partisans of the morphologic concept. Stokes seems fundamentally a nosologist except that he includes the allergic factor along with an extended list of causes. The particular merit of this point of view is that it broadens the field of investigation and presupposes a detailed study of every case.

In favor of the purely biologic concept this much may be said. It offers the most inviting field for research and promises the most hope for ultimate solution of one of our many etiologic problems.

BISMUTH THERAPY IN SYPHILIS*

DERMATOLOGICAL AND MEDICAL ASPECTS

I

By HARRY E. ALDERSON, M. D.
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DISCUSSION by *Merlin T-R. Maynard, M. D., San Jose; Chris R. Halloran, M. D., Los Angeles; H. J. Templeton, M. D., Oakland.*

SECOND in value to arsphenamin in antiluetic therapy, bismuth has assumed great importance both in early and late syphilis. As it is more effective than mercury, it is available when for any reason arsphenamin cannot be administered. Fortunately all three of these drugs can be given to most patients. Iodin is still indispensable, but at the present time we place our main reliance upon arsphenamin, bismuth and mercury, alternating between them in our treatment of syphilis. We feel now that bismuth is indispensable.

The valuable antisiphilitic action of bismuth was first discovered in 1889 by Balzer and later by Sazerac and Levaditi, who observed the rapid destruction of spirochetes in experimental animals. Much work has been done since then. Bismuth not only destroys *treponemata pallidae*, but inhibits the activities of the organisms not reached by increasing the resistance of the patient. It is a comparatively safe remedy, having fewer and less serious untoward effects than arsphenamin or mercury. Frequently a blue line is seen along the gingival border. Sometimes a mild stomatitis will develop, but this is rarely severe. At times there is renal irritation. Occasionally an enterocolitis is experienced.

Various skin eruptions have been reported, but in view of recent experience some of these complications may be due to arsenic occurring as a contaminant in the bismuth. At the January meeting of the Dermatology and Syphilis Section of the New York Academy of Medicine, which I attended, a case of exfoliating dermatitis was shown where the patient had received only bismuth injections. In the discussion, A. Benson Cannon reported that recently he had found some of the widely used bismuth preparations contained appreciable amounts of arsenic. This throws a new light on some of the reported complications of bismuth therapy.

Several have observed that prophylactic injections have considerable effect in preventing infection of persons exposed to syphilis. Krulle quotes Sonnenberg,¹ who gave intramuscular injections once a week to sixty nonsyphilitic prostitutes for eighteen months. Only two became infected with syphilis and in both cases infection occurred before much bismuth had been given. Among fifty control cases not given bismuth, 40 per cent became infected (as compared with 3.3 per cent among the injected patients).

The number of bismuth preparations on the market is constantly increasing. A soluble preparation, now known as iodobismutol, has been developed by Hanzlik, Stanford University Medical School. It was tried out clinically in the neurological service of Doctor Mehrrens and in the Skin and Syphilis Clinic, where I found that the *treponemata* disappeared from primary lesions very early and various types of syphilids responded favorably to its action. This preparation will be discussed more in detail by Hanzlik and Mehrrens.

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II

By SAMUEL AYRES, JR., M. D.
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A LITTLE more than a decade has now elapsed since bismuth was introduced as an agent in the treatment of syphilis. Its acceptance was rapid and its present almost universal employment in the treatment of that disease is ample testimony of its efficacy. It shares honors with other standard remedies, and in the hands of many capable clinicians has to a large extent superseded mercury. It has inspired a large volume of literature, which is being continually augmented by statistical summaries and reports of new preparations. In view of these facts it would seem worth while to review briefly the available information regarding the clinical aspects of bismuth, and to add a few illustrative personal observations. These points will be discussed under the following headings: effect on the spirochete; effect on serological reactions; effect on clinical aspects of syphilis; toxic effects; therapeutic considerations.

EFFECT ON THE SPIROCHETE

Numerous experimental and clinical observations have proved conclusively that bismuth is highly spirochetocidal. Sazerac and Levaditi¹ introduced bismuth for the treatment of syphilis following successful sterilization of chancres in experimental syphilis in rabbits. They found that 400 milligrams per kilogram of body weight of sodium potassium tartrobismuthate injected intramuscularly was well tolerated. One-fourth of this amount was sufficient to cause a disappearance of spirochetes from the chancre in twenty-four hours, followed by healing of the lesion within two to four days. In nine cases of chancre reported by Pasini,² the darkfield became negative within twenty-four to forty-eight hours after one injection of sodium and potassium tartrobismuthate. Both Levaditi³ and Fournier have demonstrated by gland punctures that the regional lymph glands are rapidly sterilized of spirochetes by intragluteal injections of bismuth. Levaditi³ found that fat-soluble bismuth is even more rapid in its spirocheticidal effects than the insoluble preparations, and that one, or at most two, intramuscular injections are sufficient to cause destruction of the spirochetes in the chancre or mucous patch.

EFFECT ON SEROLOGICAL REACTIONS

Since very few physicians use bismuth exclusively in the treatment of syphilis, it is somewhat

* Read before the General Medicine Section of the California Medical Association at the sixty-first annual session, Pasadena, May 2-5, 1932.

¹ München. med. Wehnschr., 78:1554, 1931.

difficult to appraise its value in regard to the effect on the serological reactions. Schwartz⁴ has reported the results of treatment of more than five thousand syphilitic patients at Fournier's Clinic during the past ten years, in which bismuth was the only drug employed. Schwartz states that at first, when using the insoluble preparations of bismuth suspended in oil, the results, while not as rapid as with arsphenamin, were fully as efficacious, while the lipo-soluble bismuth preparations are as rapid in their action as arsphenamin and have a more constant and lasting serologic action. Schwartz adds that no case of bismuth resistance has been seen in the series, where bismuth alone was used, which is in striking contrast to the not infrequently observed arsenic resistance cases.

More specifically Fournier⁵ states that in a series of two hundred patients treated with lipo-soluble bismuth the Wassermann reaction usually became negative after the first course of treatment, and in those very exceptional cases in which it was still partially positive after the first course it became negative after a second course. A course consisted of ten to fifteen intramuscular injections of an oily solution containing five per cent of metallic bismuth, given twice a week.

Grund⁶ reported that in a series of seventy-five Wassermann-fast cases, all of whom had been treated with arsphenamin and mercury from one to seven years, 33 per cent became negative after fifteen injections of sodium and potassium tartro-bismuthate in .2 gram doses; 60 per cent, however, were unaffected.

EFFECT ON THE CLINICAL ASPECTS OF SYPHILIS

The disappearance of syphilitic lesions under bismuth therapy parallels the destruction of the spirochete and the improvement in the serological reactions. Just as bismuth will sometimes change an arsenic-resistant Wassermann reaction from positive to negative, so it is also capable of causing the disappearance of arsenic-resistant lesions. The following brief case history is a good illustration of this phenomenon. It also contradicts the opinion frequently expressed that an attack of arsphenamin dermatitis exerts a favorable effect on the clinical course of a luetic infection.

REPORT OF CASE

Mrs. M. T., age twenty-five, apparently acquired a syphilitic infection from her husband about one month before the birth of her baby. An ulcer developed on the vulva which healed without treatment in a few weeks and was not followed by any recognized secondary eruption. Following delivery the patient developed what she termed "childbed fever" and was ill for several months. The first time that the patient became aware of a syphilitic process was when the baby began to feel sick and developed a scaling eruption of the palms and soles at the age of two months. The Wassermann test on both mother's and baby's blood was positive. The patient's physician began treatment with one of the arsphenamin preparations intravenously. After the sixth injection the patient noted an itching eruption, but was given another injection and promptly developed a generalized exfoliative dermatitis. The patient was then given rather inadequate doses of sodium thiosulphate by mouth and by vein, and the eruption gradually subsided.

About three months after the last injection of arsphenamin, which had precipitated the dermatitis, the patient came in because of falling hair and a new eruption which had developed. On this date, the arsenical eruption had entirely disappeared except for maceration and redness beneath the breasts, some scaling in the scalp and desquamation of the palms and soles. Superimposed on the remnants of the arsenical dermatitis of the palms and soles was a new eruption of scaling maculopapules. There were no lesions between the toes, and a microscopic examination of scales was negative for fungi.

There was also a typical pale pink nonsquamous macular eruption involving the entire body. The throat was red and sore and there was a generalized superficial lymphadenitis. The hair was very thin over most of the scalp; this may have been due to the arsenical dermatitis. A Kahn test of the blood was strongly positive.

The patient was given an oil soluble bismuth preparation intramuscularly, beginning with one-half the usual dose. The medication was well tolerated. After the fifth injection, or two and a half weeks after beginning bismuth therapy, a note was made to the effect that the rash on the body was practically gone and the feet were nearly well. At the completion of seventeen doses of bismuth and a rest of six weeks the Wassermann was still strongly positive. After further treatment, including six doses of mercury salicylate and six doses of oil-soluble bismuth, a Kahn test was two plus. The course was continued without interruption and after another twelve doses of bismuth, including oil soluble and salicylate, followed by a rest period of one month, the Kahn was negative. The patient is still under treatment with bismuth.

Numerous investigations have found bismuth equally effective in healing primary, secondary or tertiary lesions of syphilis. Bismuth is particularly useful in cardiovascular lesions, especially in the presence of aneurysm, because of the freedom from the danger of sudden and often fatal Herxheimer reactions.

Fournier⁵ mentions two patients who had old syphilitic lesions with a uniformly enlarged aorta who were greatly benefited by regular treatment with small doses of bismuth. Fournier has used bismuth exclusively for over ten years and feels that it is equally valuable in all stages of the disease. Schwartz and Levin⁷ report that "in secondary syphilis, bismuth therapy causes the disappearance of the local and general manifestations and reduces the Wassermann reaction. It does these more quickly and efficiently than mercury, and there is less possibility of a Herxheimer reaction or a neuroresidue than when arsenotherapy is employed. It has been used in the presence of jaundice, caused either by the disease or by arsenic, with success and without producing harm." Shivers⁸ concluded, from a study of fifty-seven patients with late manifestations, that bismuth is effective clinically in all forms of tertiary syphilis, and is superior to arsenic in some cases of neurosyphilis.

TOXIC EFFECTS

Very few serious accidents have been reported as the result of bismuth therapy. Local irritation at the site of injection in the form of a hard, tender lump is sometimes noted. Very rarely one of the lumps will break down and form a sterile abscess. Careful technique of injection will prevent some of these local reactions. The bismuth must be injected deeply into the gluteal muscles,

not into fat or into an artery or vein; the injection should be given slowly and the buttock gently massaged after the treatment. In spite of all precautions, however, some patients seem to have an idiosyncrasy to certain types of bismuth. The author has one patient who frequently develops painful nodules and, occasionally, high fever after injections of potassium bismuth tartrate, yet who tolerates bismuth salicylate perfectly.

A blue line on the gums occasionally develops, indicating an approaching saturation with bismuth. Serious cases of stomatitis such as are seen in patients under mercury treatment are seldom encountered, yet the appearance of "bismuth line" should serve as a warning not necessarily to stop treatment, but to reduce the dose or lengthen the interval between treatments. Scrupulous care of the teeth and gums will often prevent trouble.

Bismuth therapy should not be instituted immediately after the development of an arsphenamin dermatitis. If the dermatitis is not allowed to subside completely before the bismuth is given, there may be a reactivation of the arsphenamin dermatitis. While this does not always occur, as in the case reported above, such a possibility must be borne in mind, and is illustrated by the following excerpt from a case history.

REPORT OF CASE

Mr. H. T. had been treated by neoarsphenamin and bismuth for an esophageal gumma. After the ninth dose of neoarsphenamin a generalized exfoliative dermatitis developed with a great deal of edema, which on the feet developed into blebs. This gradually subsided under sodium thiosulphate. After nineteen doses of sodium thiosulphate, a note was made to the effect that the patient was much better and might return in about one month for observation. About seven weeks later the patient came in because of sudden pain in the left shoulder which interfered with raising the arm. The eruption had entirely disappeared. The Kahn test at this time was negative. The patient was given an intramuscular injection of an aqueous solution of bismuth. About five hours after the injection a recrudescence of the dermatitis appeared by itching, redness and swelling of the hands and feet, and a generalized erythematous rash.

In the light of some recent work which A. B. Cannon and Alderson have done, it is possible that this reaction may have been due to a small amount of arsenic which has been found to contaminate certain types of bismuth. Unfortunately the batch of bismuth from which this ampoule was taken was not tested for arsenic.

Vigne⁹ has recently published statistics on intolerance to bismuth observed during a period of five years at the Antivenereal Dispensary of The Hotel Dieu de Marseille. Of 2,396 patients who were treated by bismuth alone, 202, or approximately eight per cent, showed signs of intolerance, such as stomatitis, asthenia, abscesses, local intolerance, cutaneous eruptions, and various general symptoms. Stomatitis was responsible for more than half of the cases of intolerance, but was relatively benign and was never as severe as that observed with mercury.

According to Schröder,¹⁰ bismuth very seldom causes any kidney irritation, and in those cases where toxic effects are noted, the lesions are as a

rule relatively benign, seldom involving the glomeruli. Cases of severe damage to the kidneys from bismuth are exceedingly rare. Mercury in smaller doses causes considerably more severe lesions of the kidneys than bismuth. Schroder advocates the use of bismuth in cases of syphilitic nephrosis. Taralrud¹¹ notes a somewhat higher incidence of kidney irritation, but his cases were treated by combined courses of bismuth and arsenical preparations; even in his series, however, the lesions were benign.

Sudden death has been reported by Curtis¹² from the intravenous administration of a water-soluble bismuth preparation.

The appearance of any toxic manifestations calls for a cessation of treatment and the intravenous administration of sodium thiosulphate in one-gram doses two or three times a week. Sodium thiosulphate apparently combines with heavy metals, and causes their elimination.

THERAPEUTIC CONSIDERATIONS

Many forms of bismuth have been introduced and practically all of them are of value. It is difficult to state dogmatically which type of bismuth is preferable. The ultimate decision will rest upon far larger series of cases than are at present available. In general, the preparations divide themselves into three main groups: insoluble or suspensions in oil or water, fat soluble, and water soluble. Those who base their choice on the insoluble preparations advance the theory that because of the slow absorption, depots of bismuth are formed at the site of injection from which a gradual but prolonged absorption of the metal into the system takes place, and that by reason of this slow absorption over a prolonged period, a better therapeutic effect is obtained. Those who favor the water soluble preparations advocate giving the injections more frequently and claim that by reason of the rapid absorption a greater spirocheticidal effect is to be anticipated. Midway between these extremes stand those who regard the liposoluble preparations as combining the advantages of the other two types.

It is possible that more frequent injections of a water-soluble or oil-soluble preparation should be given in early acute cases, while the insoluble preparations should be reserved for chronic cases or for those patients who find it impossible to make frequent visits. Besides these indications, certain patients will be encountered who will tolerate one type of bismuth, whereas another type may cause unpleasant local or general reactions.

Bismuth should always be injected intramuscularly, never intravenously. It should be given in courses of ten to twenty injections once or twice a week, depending on the type of bismuth used. The urine should be examined frequently to detect any evidence of kidney irritation, and the gums should be watched for a bismuth line. A preliminary phenolsulphonephthalein kidney function test would be an additional safeguard.

During the past few years, a preparation known as "Bismarsen," or bismuth arsphenamin sulphate, has been introduced. It is a combination of bis-

muth with an arsphenamin type of arsenic, and is administered intramuscularly. Many promising reports of its efficacy have been published, but inasmuch as it depends partly upon an arsenic group for its results, it cannot properly be included in this report, which is an attempt to appraise the value of bismuth *per se*.

CONCLUSIONS

1. During the past ten years bismuth has been used widely, and in some clinics *exclusively* in the treatment of syphilis.

2. Reports from many quarters and based upon observations in many thousands of cases all confirm the value of bismuth in its rapid spirochetidal effects, its ability to heal syphilitic lesions in all stages of the disease, its prompt effect on the serological reactions, and its relatively low toxicity.

3. Three main types of bismuth are available: the insoluble suspensions, the oil soluble and the water soluble. All three types have their special fields of usefulness.

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DISCUSSION

MERLIN T-R. MAYNARD, M. D. (408 Medico-Dental Building, San Jose).—The papers presented have covered the subject in such a workman-like manner that I am embarrassed to find further remarks to apply as a discussion.

I believe that the general practitioner is today faced with a difficult and puzzling situation relative to the choice of bismuth preparations and the methods of their use. This situation is brought about through the plague of preparations with which the physician is being detailed. Usually he can obtain no accurate

knowledge of the chemical constituents and is supplied with a mass of unscientific statements regarding the efficacy of the product.

The reaction of the average practitioner is one of a distrust of the various preparations, and he is inclined to disregard bismuth and treat his patient with arsphenamin alone. I believe that it is the better part of wisdom to listen to none of the claims of the drug houses and use only the official preparations. The individual physician, of course, when he is using a preparation of known potency, is advised to continue with it unless the indications of the case require a change. In speaking of the bismuth resistance of spirochetes, I have seen only one such case and that was one of a young woman who was put on bismuth alone because of a sensitivity to arsenic. She was given arsenic in the early secondary stages of the disease, during which time the eruption disappeared. However, even though she had had ten injections of potassium-bismuth-tartrate she developed nodules of a very resistant type. I concur with Doctor Ayres in his statement that bismuth should not be given intravenously.

In the majority of intravenous preparations the minimum lethal dose is surprisingly close to the therapeutic dose. This fact alone should contraindicate its use.

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CHRIS R. HALLORAN, M. D. (1052 West Sixth Street, Los Angeles).—When bismuth first came into use in the treatment of syphilis it was accepted with enthusiasm, especially because of the fact that it opened a new angle of attack upon the obstinate case. The favorable results obtained by its use in Wassermann-fast and relapsing infections soon stimulated interest in the use of the drug in early syphilis. The literature has recently been growing more and more voluminous with articles in the praise of the drug; so much so that we may be led to an enthusiasm for its use that later observations may prove unwarranted.

There are ample reports that seem to prove conclusively that bismuth, though an inferior spirillicide to the arsphenamins, is superior to mercury. As a resistance-building drug, bismuth has been proved an equal to mercury. It also apparently has an added advantage over the latter drug in that it produces less irritation to the kidney, and evidences of intolerance are met with much less frequently. However, when we consider that in the treatment of syphilis the value of any remedy must be determined by freedom from clinical manifestations of the disease and a negative serology, not only for the span of a few years but for the remainder of the life of the patient, we realize that the time has not yet arrived for a final evaluation of the curative power of bismuth. We are now seeing occasional cases of relapse and neuro-recurrency wherein it is quite possible that too much dependence has been placed upon bismuth to the relative exclusion of other drugs.

Granted that syphilis is a disease in which relapse is inevitable in a proportion of cases irrespective of therapy, the late manifestations of the disease are usually the result of failure of early diagnosis and lack of rigid adherence to a carefully formulated plan of treatment rather than inadequacy of the drugs used. Our present knowledge would seem to indicate that our chief reliance in the treatment of syphilis is to be placed in uninterrupted courses of treatment throughout the first year, in which too much dependence is put upon no one drug. The most adequate plan of therapy seems to be one in which the patient is placed upon one of the arsphenamins in combination with bismuth or mercury. It seems wise at present to alternate the courses of the latter two drugs. At the same time the patient is receiving his course of bismuth or mercury, he should be given potassium iodid by mouth.

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H. J. TEMPLETON, M. D. (3115 Webster Street, Oakland).—The authors have covered the subject so thoroughly that I can add only some personal observations. Several years ago, along with Thomson

and Rix,¹ I studied the absorption rate of practically all of the bismuth compounds that were then available on the American market. The results of this study caused me to discontinue the use of several compounds which were so slowly absorbed as to render them, in my opinion, of very doubtful value.

As to the practical therapeutic effectiveness of bismuth, I can say that I have repeatedly seen destructive tertiary lesions of the skin disappear rapidly under the use of bismuth without iodids. I can recall one spectacular series of cases in which the value of bismuth in Wassermann-arsphenamin-fast cases was demonstrated. A group of ten children and infants with congenital syphilis had been treated over a period of many months with repeated courses of the arsphenamins alone. Their Wassermann reactions all remained positive. They were then given from ten to twenty injections of a bismuth compound whose value had been well established. In every instance the serology became negative. I realize that I will probably never again obtain such striking results in a series of "fast" cases.

Milian has stated that the relative therapeutic value of arsphenamin, bismuth, and mercury might be roughly evaluated in the ratio of 10-7-4. My own experience, admittedly unsupported by statistical data, would lead me to believe that bismuth more closely approaches arsphenamin and is farther from mercury, in point of effectiveness, than is indicated by Milian's formula.

SOME CALIFORNIA SCHOOL ECONOMICS*

By ALLEN F. GILLIHAN, M. D.
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SCHOOL economics through the preventive medicine glasses of public health may be defined as that study which treats of the distribution of wealth with reference to schooling from the public health point of view. The mere spending of money is not what should claim our interest, but what is accomplished—the net results to be obtained only through the spending of money—in other words, the results obtained from our purchases should claim our attention. Millions may be spent in improper health purchases and school public health never obtained. It is only when proper health purchases are made that school public health becomes possible.

SCHOOL TEACHING AS AN INDUSTRY

School teaching is an industry, just as is the manufacture of shoes or automobiles. California is engaged in this industry. There is invested in this state in school property—apart from the university—more than \$496,000,000, which may be segregated as follows:

Elementary schools	\$232,635,000
Junior high schools	41,094,000
High schools	152,830,000
Junior colleges.....	2,916,000
Total state investment.....	\$496,529,000

This represents the size of our factory. The amount of material our industry is handling is

represented by school enrollment, which is as follows:

School	Grade	Enrollment
1077	Kindergartens	82,283
4058	Elementary schools	695,135
153	Junior high schools	113,963
363	High schools	498,483
36	Junior colleges	16,918
5687	schools enrolling	1,406,782 in 1929-30

The business of our industry is still growing.

Total State Enrollment

1914.....	513,319
1916.....	557,350
1918.....	617,402
1920.....	712,818
1922.....	862,461
1924.....	1,055,752
1930.....	1,406,782

A unit of cost in our industry is shown by the annual cost of education per child in 1930-31.

Cost of Year's Tuition

In kindergartens	\$103.99
In elementary schools	102.05
In high schools	188.97
In junior colleges	239.32

Notwithstanding this enormous outlay we cannot say that this industry is flourishing for we are informed that about eight out of every one hundred children repeat one or more grades. In a big manufacturing plant if they were compelled to remachine eight out of every hundred parts they manufactured, I would be inclined to feel that something was wrong.

Enrollment in elementary schools in 1929-30, 695,135; 8 per cent equals 55,610.

COSTS OF A YEAR'S TRAINING

The cost of a year's training in the elementary schools is \$102.05. This equals \$5,675,000 lost in the elementary schools in California in the year 1929-30. A child who is compelled to repeat a course is retarded one year, during which he must be fed, clothed, and housed. Dublin and Lotka have determined that for the average child this is worth \$394.14. Fifty-five thousand six hundred and ten repeaters have cost their parents for this wasted year in California \$21,918,125.40, indicating a loss of \$27,593,000.

In the county of San Luis Obispo with a population of about 30,000 and an enrollment in elementary schools of 4,169, there were in the year 1931-32 220 repeaters; five and one-third repeaters per 100 pupils. The state averaged eight repeaters per 100 pupils; 220 repeaters at \$102.05 equals \$22,451.

One grows weary attempting to grasp the meaning of these totals in the red. Let us view our industry from the "results obtained" point of view, as in the end it is only the results obtained that count.

Knowledge of preventive medicine is easily obtainable. It should be the property of every individual, learned in his school days so that he can maintain his health through life. It should be

¹ Templeton, H. J.; Rix, B. M.: Absorption Rate of Bismuth Compounds Arch. Dermat. and Syph., 21:739-755 (May), 1930.

* The author of this paper is the health officer of San Luis Obispo County. Abstract of paper read at the meeting of California health officers, San Diego, September 27, 1932.

taught properly in our public schools, but the world rightly feels that education is being overloaded—too many subjects; too much “dead wood” for the growing mind to carry in its preparation for the adult life of this generation, to say nothing of the adult life of the future.

CRITICISMS OF SCHOOL METHODS

A criticism: Regarding the instructing of mentally defective children in the same classroom where normal children are taught; and it is unfortunate that this is done altogether too frequently in the smaller schools in this state. A fifteen-year-old boy may have advanced to a ten-year mental age class, but can go no further. The habits of thought and play of fifteen-year-old boys differ from the habits and thoughts of ten-year-old boys. To permanently keep such a boy in the ten-year mental age class would be as foolish as to pass him along to class after class as his years of life increase without his being able to profit thereby. In either event he would require an undue amount of attention from his teacher, whose time could be given to him only by stealing time from the normal children in the class. The presence of an abnormal child distracts the attention of the other children from their studies. Those who are behind in their work to such an extent as to distract the attention of classmates as well as to require undue attention from the teacher should be placed in special backward classes and under teachers prepared to handle such mental defectives.

Another criticism can be made in regard to a correct convalescent program. After having been sick at home for some weeks from a disease such as whooping-cough or scarlet fever a child returns to school. The active health department has seen that he is free from infection before allowing him to again mix with his classmates. He is now attending school every day and is no longer wasting the sixty-five cents of school funds per day by being absent, but why try to make him speed up his work to catch up with the class; he has been sick, why throw extra strain on the already strained body mechanism? The ill effects of this may not be seen at first. He returns to school and is stimulated to catch up, overworks himself, and shows this strain later in his work; whereas, if his strength had been conserved on returning to school until he had gradually gotten into his old stride, the good effect would have been felt by preventing a breakdown. This breakdown is usually blamed on the disease he had, and not on the real cause, mismanagement.

Still another criticism is in the teaching of personal hygiene in our schools. Why teach a school child the necessity of keeping the hands clean, and then, as in many places, provide the school only with a fly-infested drop privy with no place at which to wash the hands? If there happens to be water available, probably there will be no towel, and if there happens to be a towel in such a school, most likely it will be a dirty common towel. The common facts of preventive medicine have been proven to be true time and time again; the teacher should be better prepared, and be given

ample opportunity to teach and demonstrate them. Teaching and not applying preventive medicine would be as useless as to teach every citizen the very complicated particulars regarding the spectra of the different types of fixed stars when no application whatever was to be made of such knowledge in after life. It would be a downright waste of energy, time, and money.

Some of the modern welfare work is that which is carried on in the big industries, such as a New York department store which employs 10,000 workers to whom a free lunch is served each day because it has been found that feeding these 10,000 workers is less wasteful and less expensive than the slowing up in an afternoon's work which results from the noon-hour hurry on a crowded street to a hot-lunch stand and gobbling unsatisfactory food, then hurrying back to work. This store even provides care, treatment, and rehabilitation for its tuberculous employees. References to other industries which have found it profitable to provide for the welfare of their employees could be cited.

A study of absences and repeaters in a number of the schools of Santa Barbara County made by Dr. R. C. Main, County Health Officer, may be referred to in connection with similar losses through absences and repeaters in the schools of San Luis Obispo County. In Santa Barbara County, during one school year, the absences reached 89,779 days, or an average of nineteen days of absence for every pupil enrolled. Estimating this loss at 65 cents per day, \$58,356.25 was lost to a few of the schools of this county through non-attendance. Doctor Main discovered that 28 per cent of the absences was due to colds in the head, sore throat, tonsillitis, and similar illness. Fourteen per cent was due to the common communicable diseases such as measles, chickenpox, mumps and like diseases. Four per cent had been exposed to some communicable disease and might develop the disease or transmit it to others. Considerably more than half of all absences among school children was due to illness, much of which can be classed as preventable. In the county of San Luis Obispo during the school year 1931-32, 27,262 school days were lost in the elementary schools which, at 65 cents per day, amounted to \$17,720.30. During the same year a total of \$22,451 was lost because of repeaters. Added to the loss through absences, the total was \$40,171.30, which sum was almost twice as great as the entire budget for the County Health Department during the same year.

IMPORTANCE OF PREVENTIVE MEDICINE

Through these glasses of preventive medicine let us see what is the most important function in the schools in relation to the public health. The aim of my small department is, “To enable the people to live a little longer, and through health and education to enjoy more contented lives.” It would show an equal lack of intelligence in a teacher of today who tried to impart knowledge to a sick brain as it would to punish a mental defective for having no brain. Punishing a mental defective would be to go back to the Middle Ages

when they punished insane people for being crazy. Still this very thing is being done every day in many of our elementary schools. A boy fails because he cannot see the problems on the board. A very simple test would demonstrate that poor vision was his trouble. Defective vision and poor teeth are among the penalties that this generation must pay for the activities of our civilization. Every child should be examined before he enters school to discover if he has any hampering defects that will retard him in acquiring an education. When found, such defects should be corrected at once. The school nurse is most useful in discovering these defects, and in getting them corrected. She is not the one to make these corrections, but her training is such that she makes a perfect "liaison office" between the school with its activities, the parents with the home life, and the various agencies, public as well as private, which are interested in securing these corrections.

Modern education of the normal growing child produces in time an actual asset to society; but the child with a hampering defect becomes more and more of a liability as education, contact with society, and growth advance. In time he becomes a liability, or he may even become an actual menace to society.

SOCIETY'S OBLIGATION TO THE CHILD

The object of modern education should be to produce generations of assets, and not to produce an increased number of liabilities. Children with defects should have these defects corrected as soon as discovered in the endeavor to cut off the supply of probable liabilities as early in life as possible.

Being a physician, I must naturally defend the physician's services. People who can pay for a doctor's services should be required to do so; but my public health training and experience do not allow me to carry the assumption further. I do not believe in protecting the business and income of the medical profession at the expense of society. Public and private charities should be invoked when necessary to secure corrections of defects. The school nurse is the proper person to get this work done even to the breaking of a deadlock when necessary. A defect should be corrected when discovered, not delayed maybe for several years, until the parents can find money enough to pay the doctor's fee.

FIELD OF THE SCHOOL NURSE

The school nurse's activities are not to be measured so much by the number of defects that she may discover as by the percentage of discovered defects that she succeeds in having corrected. Misunderstanding of the school nurse's duties and limitations frequently is the cause for her being unable to secure better results. I recall a recently appointed school nurse having referred to her a boy with a boil with the instructions to take care of him. When she refused to do so the school authorities were very wroth. They complained to the county health officer at whose earnest solicitation she had been appointed, telling this health officer that his nurse was no good. Here was a

boy with a boil that she had refused to open; why, the school teachers had always opened and attended to these things and they expected to be relieved of such work now that a nurse had been appointed. The school authorities were very much surprised when it was pointed out to them that opening a boil was practicing medicine which the nurse had no license to do, and when the school teachers did such work they laid themselves open to damage suits. If the boy's parents could not pay for this small medical service the school nurse was the proper person to secure free services for this boy.

The stoppage of leaks is the work of the specialist but not the work of any one person no matter how well trained; frequently many specialists have to work on a single simple problem. When a teacher finds that a boy is unattentive and seems to tire out mentally much quicker than the average child the matter should be investigated by the school nurse. Now this nurse is not trained in the use of the stethoscope; maybe she has to take the boy to the school physician, who finds the boy undernourished and underdeveloped, but otherwise normal. On making further investigation at the home the nurse finds that the boy of ten is compelled to milk twelve cows daily before he goes to school and then frequently goes without a proper breakfast. Is there any wonder that he tires mentally before the school day is completed? To carry the example further: Possibly the parents refuse to make the advised change and give this boy less to do. The father could easily take care of these twelve cows, but he believes the boy should work. "What has he got him for, if not to work?" Surely, this is contributing to the neglect of a minor, and the juvenile court should step in. In this one case we have the teacher, the school nurse, the school physician, the parents, the judge of the juvenile court all being compelled to contribute to the prevention of a school child from becoming a repeater and growing up to be a liability to society instead of an asset. If these people do not follow their duties, the burden is thrown on those who are really trying to carry it, disturbing the balance and, just as in all machinery, when the balance is disturbed, resulting in a breakdown.

SANE CONSERVATION OF PUBLIC FUNDS

At all times, and particularly during the present time of financial depression, we should try our utmost to avoid wasting our funds—we should make every dollar count. Without giving sufficient attention to the problem we may stop an activity which we think we can do without, only to find we have caused a greater leak than the one we have stopped. The denser a population grows the more complicated become the vital problems. The population in California is growing as rapidly as anywhere in the world and our problems are becoming more and more complicated. We desire our population to improve so that California may become a desirable place in which our children can live and enjoy life. Education must never be neglected. The main object in our lives should be

to prepare our children so that they in turn will be better prepared to face their life's problems than we were, and to make a better success of them. I would rather have my son grow up to be ashamed of his father's poor education than to have a son grow up whose education would be a reflection of my neglect.

Education cannot become productive until we plant it in a healthy soil. Like anything else it produces only barren results if planted on barren soil. A healthy childhood does not mean continued health for life. Besides being healthy and being freed from hampering defects, these children must be shown how to so retain their health that they will unconsciously apply this knowledge throughout life.

This knowledge cannot be obtained without expenditure. May we be so guided that the purchases turn out to be assets, not liabilities.

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THE LURE OF MEDICAL HISTORY*

LEVI COOPER LANE, M. D.—THE LANE
POPULAR LECTURES†

By EMMET RIXFORD, M. D.
San Francisco

II

THE Place Given to the Classics.—As was the fashion in education in the days of Doctor Lane's youth, great attention was given to the study of the classic languages. One of Doctor Lane's uncles, Jacob Cooper, became professor of Greek and Hebrew in Rutgers College, New Jersey; and Doctor Lane and another uncle roomed together in Union Theological Seminary, Schenectady, New York, and had an arrangement with each other that their daily conversation should be in Latin. Doctor Lane would tell with much gusto of how one day, when approaching the building in which they lived, he saw his uncle leaning out of the window in his shirt sleeves, wildly gesticulating and shouting at the top of his voice, "Ignis, ignis." The building was on fire. Doctor Lane's study of the classics strongly impressed his literary style, which was a little ponderous, perhaps even pedantic, and yet with quaint imagery. One instinctively feels that his language could easily be translated into Latin. He was fond of taking classic scenes as his illustrations, *e. g.*, in his formula for granting of diplomas to the graduating class each year, he used the following words:

"In the olden days of scholastic learning, the approach of the candidate to the baccalaureate threshold was the scene of severe contest between him and the guardian authorities; and the witnesses to that

occasion were entertained by the clangor of lances sharply wielded in dialectic battle, in which the candidate was compelled to prove himself fitted for the honors in question. Dismantling this famous ceremony of its ancient dress, I will still preserve the spirit of the same by formally announcing to those who are present to witness your graduation, that you have complied with all the regulations of Cooper Medical College; that you have successfully passed the annual examinations of a three years' course of medical instruction in that institution; in fine, that you have well run the appointed curriculum. As a reward therefor, the directors and faculty of Cooper Medical College have instructed me, its President, to confer upon each of you the degree of Doctor of Medicine, and to give to each of you the diploma of this institution as perpetual and universal evidence of such promotion."

Doctor Lane a Hard Worker.—Doctor Lane was an indefatigable worker. A splendid anatomist, he kept his anatomy alive and constantly refreshed by doing a little dissecting each week. In fact he had a private dissecting room on the fifth floor of the college where in preparation for any serious surgical operation he was wont to make dissection of the part in order that he might not be found wanting in the anatomy of the region on which he was to operate. In his relations with his faculty and students, he was always master. His students he knew by name, often exciting wonder that he could remember so accurately the names of so many students. But he had a system about it, a geographical classification, he knew and remembered the town from which the student had come. His teaching was chiefly by lecture, in which he had the ability to make such strong pictures that they were easily remembered. During the college term he would often invite a group of senior students Sunday morning to witness an operation, done in the largest room in his office, the men's waiting room. He had a few bedrooms on the second and third floors which served as hospital.

Sometimes, when the operation was slow and tedious, he would quote from some classic writer or from Shakespeare. He knew Macbeth, and on one occasion was reciting a passage when his attention was suddenly required in the operation. A sepulchral voice from the back of the group of students went on and finished the scene. It happened that one of the students was C. B. Bishop, a comedian in the old California Theater Stock Company.

Doctor Lane was accustomed to take two students from each junior class to serve as house officers in his office in the afternoons, substituting that work for work in the clinic. I had this privilege for two years, as did my associates, Dr. William Fitch Cheney and Dr. Stanley Stillman, and others. There were no trained nurses, or very few, in those days and we students prepared everything for the operation; one gave the anesthetic, another assisted, and one was assigned as nurse to take care of the patient and watch him for the first twenty-four or forty-eight hours. It was a valuable experience. On Sunday afternoon when practice was quiet, Doctor Lane would often call his students into his office and read us a chapter from Hippocrates or Lucian or Tacitus, translating as he went along.

*A Twenty-five Years Ago column, made up of excerpts from the official journal of the California Medical Association of twenty-five years ago, is printed in each issue of California and Western Medicine. The column is one of the regular features of the Miscellany Department of California and Western Medicine, and its page number will be found on the front cover index.

†Part I of this paper was printed in the December California and Western Medicine, page 382.

Doctor Lane had a wonderful nose. He said, "These young men have to have a thermometer to make a diagnosis of typhoid fever. They don't know typhoid. If one knows typhoid fever he can make the diagnosis on entering the room." And that nose of his could smell a cigarette further than anyone I ever knew.

On one occasion I asked him for a vacation, saying that some friends had planned a tramp in the Sierra and that I would like to go. His reply was that "if you feel that you need a vacation, of course you should have it." Then he looked off, as was his wont, over his glasses, and I waited knowing that something more was coming. He said, "When I was your age I missed but two days in my office in fifteen years."

His Physical Health.—I noticed on a number of occasions that he would leave the operating table in the midst of an operation to be gone for perhaps ten or fifteen minutes, during which time we, his assistants, ligated small blood vessels and otherwise carried on minor parts of the work, when he would return and finish the operation. I often wondered why he left the room. Years afterwards I heard him say that he suffered from indigestion and many times would have to leave the operating table to go out and empty his stomach.

When asked as to his health, he always said it was excellent and slyly remarked to us afterwards that he always gave that answer because otherwise he would have to answer the same question again; and yet he was a great sufferer from sciatica, though few were aware of it. He used to say with wonderful meaning, "It is a great thing to relieve pain."

Doctor Lane's Offices.—Most of his surgery in his active years was done either in private houses or in some of the numerous cheap boarding houses south of Market Street, or in the upper rooms of his office. The front room on the top floor was generally used for more important operations and I can remember sitting up all night many and many a time watching the patient that had been operated upon in the morning. We always knew when morning was coming by hearing the clatter of the vegetable wagons as they came in slow procession down Mission Street from the gardens of South San Francisco.

The office on the ground floor comprised four rooms, a front room, the men's waiting room, the women's waiting room where Doctor Lane had his desk and kept his records, between these, his private office, opening into each of these rooms. There was his examining couch, his instrument cabinet, and a folding bed for the old man who acted as night watchman. Hanging by a thong on the door frame was a pick-handle, to be used for defense in emergency. The fourth room was a sort of laboratory where we young men waited his pleasure.

Doctor Lane's fees were moderate, yet the volume of his office business was such that I remember a certain day in which work was slack enough to cause him to remark that for twenty-five years his office visits had averaged more than

\$50 a day. Old soldiers always appealed to him. He said that any man who had been in Andersonville Prison could have his services without charge. I shall never forget an old miner or prospector who had had some surgical operation, coming downstairs to pay his bill. Doctor Lane had done some operation upon him and the man was ready to leave. Doctor Lane said, "Have you paid your board bill upstairs?" "Yes." "How much money have you?" With some pride the miner answered, "\$75," as if that to him was quite a sum. Doctor Lane said, "Well, I think that \$75 will do you more good than it will me."

Doctor Lane's Knowledge of Human Nature. Doctor Lane was a great student of human nature. He was absolutely intolerant of shiftless, lazy people. On one occasion he performed a small operation on a boy, for which he would ordinarily have charged \$5; perhaps it was opening a boil. Doctor Lane was more interested in the father than in the operation. He sensed something in the man that did not ring true. With his penetrating glance which forced an answer of truth, he asked the man what he did for a living. The man stammered and finally acknowledged that he was a beggar. "What!" said Doctor Lane. "You, an able-bodied man, stand on a corner and accept alms from people who have earned their living by work! I will charge you \$30 for this operation." The man paid it in nickels and dimes. After Doctor Lane's death I told the story to Mrs. Lane. She laughed and said, "That accounts for it, for one evening Doctor Lane came home from the office chuckling and presented me with a bag of nickels and dimes. Many of them were bad."

When antiseptics finally reached San Francisco, Dr. C. E. Farnum, who was demonstrator of anatomy and who assisted Doctor Lane in much of his work, persuaded Doctor Lane to use Lister's carbolic acid spray in an operation. The machine failed to work properly and sprayed Doctor Lane perhaps more than the germs that were trying to get into the wound. Doctor Lane threw the machine out of the window and continued the operation on his old plan.

He was wont to classify surgeons as good or bad according to how they treated fractured elbow, so certain was he of the superior advantages of the straight position. If the surgeon used it, he was a good surgeon, otherwise not. Doctor Lane got splendid results in his treatment of the fractured elbow in children, which consisted of putting it up in straight position, to be sure, but taking off the dressing each day and forcibly bending the elbow through its full range of flexion. This was very painful to the child, as I know, because I often had to hold the child. In other words, although we now know the straight position is not the best, Doctor Lane got good results by molding the callus by this persistent manipulation and gradually adjusting the fragments into normal position. It was because Dr. Oscar H. Allis of Philadelphia treated fractures of the elbow in the straight position that Doctor Lane invited him to give one of the courses in the Lane Medical Lectures.

Nothing would rouse Dr. Lane's ire like a suit for malpractice. He often said he would cheerfully take the witness stand in defense of his bitterest enemy to fight a malpractice suit, and yet when a patient was brought to him with a bad result from an improperly treated fracture, Dr. Lane sent the patient back to his doctor saying, "Let him finish it." To me he said, "It might do him good to take a little of his own medicine. That doctor was the prosecuting witness in a viciously fought malpractice suit against a fine old doctor in his town who brought him into the world." Dr. Lane felt that for anyone, especially a doctor, to act as prosecuting witness against the man who had brought him into the world, was the very acme of ingratitude.

Doctor Lane's Kindliness of Heart.—Doctor Lane, an austere man, was still the embodiment of kindness to the unfortunate. I once heard him say that he did not wish any man to feel too poor to have his services. On one occasion I happened to be walking with him on the street, and when he saw me step upon a cockroach that happened to be crossing the pavement, he said, "His life was not worth much, but it was precious to him." When caring for a child he had equal regard for the feelings of the mother, and said to us, "Remember that it is her child."

As a surgeon, Doctor Lane was not greatly original and, unfortunately, kept very brief and imperfect records, so that although his practice was enormous he left very little that the student of today can use. He worked out vaginal hysterectomy as an original anatomical study, not knowing that the operation had been done in the early years of the nineteenth century in France and had been forgotten. A mother brought her child to him suffering with microcephalia. The mother said, "Can you not as a surgeon unlock my child's brain? The bone is closing in on it." This suggestion of the mother led Doctor Lane to perform the operation of craniotomy, in which he preceded Lannelongue by many years. The operation was, of course, futile because the real trouble was maldevelopment of the brain itself.

In his money matters, he had many opportunities for favorable investment. Mackay, of Comstock Lode fame, gave him a tip as to probable movements in the stock market. In refusing the tip, Doctor Lane's reply was that his mine was in his office, but an associate took the tip and realized handsomely.

Doctor Lane's Gift of Cooper College and Lane Hospital.—In building Cooper College and Lane Hospital, Doctor Lane was proud to put up a tablet reading: "This building, erected by Levi Cooper Lane, with moneys earned by himself in his profession, is dedicated to suffering humanity and to the medical profession in the hope that the former may here find refuge and relief and the latter exercise of its humane skill and intelligent sympathy." But his course in building Lane Hospital was fraught with many difficulties and strenuous opposition from property holders in the neighborhood. One property holder sent him an anonymous postal card,

threatening to blow up him and his institution with dynamite if he persisted.

I had the honor to assist Doctor Lane in his last surgical operation which was for the removal of a cancerous breast. He was so weak that it required much mental effort to complete the operation. At one stage he said, "Give me more light; I can't see in the depth." I handed him his old scissors that he had used for many, many years, saying, "Use these, Doctor Lane; they have been there so often they would scarcely need light." He smiled, and after the operation held up the scissors and said, "Never cut adhesive plaster with those scissors. That's what Doctor Cooper said to me when he gave them to me forty years ago."

After a long and exhausting illness, death finally came on February 18, 1902. The nurse in attendance said he suddenly woke from a drowse, partially sat up and said, "Oh, it is death, it is death," and expired. Doctor Stillman and I were not far away and, when reaching the room and learning of it, Doctor Stillman said, "I wonder what it looks like when seen so close at hand."

1795 California Street.

CLINICAL NOTES AND CASE REPORTS

DERMATOLOGIC DIAGNOSIS*

By MOSES SCHOLTZ, M. D.

Los Angeles

II

MORPHOLOGIC SYNDROMES OF COMMON DERMATOSES

NOW, after the consideration of general diagnostic principles, we shall proceed with portraying morphologic syndromes of the dermatoses most frequently seen in the general practice.

ECZEMA

Eczema is unquestionably the most common dermatosis. It should be stated here that eczema and dermatitis in the minds of the most modern dermatologists are identical conceptions morphologically, histologically, and etiologically. All attempts to differentiate between them proved futile, artificial, not convincing, of little practical value, and extremely confusing to the students of dermatology. I also accept them as identical and interchangeable conceptions, so one can say seborrheic and trade dermatitis or trade eczemas as well as seborrheic. The morphologic traits of eczema, *i. e.* dermatitis, are:

1. Color—Pink, pale or angry red.
2. Lesions—Macular, papular or vesicular.
3. Shape—Irregular.
4. Lesions have a tendency to coalesce.
5. Borders—Ill defined and diffuse.
6. Infiltration, scaling and crusting evenly distributed in the center and edges.
7. Itching, as a rule.

* This paper is printed in serial parts in California and Western Medicine. Part I was printed in the December number, page 375.

8. Does not ulcerate or scar.

9. Universal distribution with no sites of preference.

Chronic lichenoid eczema constitutes a special morphologic type of eczema characterized by striation, *i. e.*, lichenification (crisscross lines).

SYPHILIS

The next in importance is the group of skin syphilis. The morphologic traits of cutaneous syphilis, known as "specific stigmata," are:

1. Dusky, dull red, "raw ham" color, turning later to brown copper color.

2. Lesions located deeply in the skin rather than on the skin.

3. Secondary syphilids have a tendency to form flat lesions (flat condylomata and late nodular syphilid).

4. Early syphilids have round or oval form, late lesions—assume kidney shape (serpiginous).

5. Bullous lesions are observed only in congenital syphilis, never in acquired.

6. Syphilids are not itchy, as a rule, exceptionally they are.

7. Syphilitic ulcers have greasy, lardaceous bases with greenish dirty, heavy crusts, punched-out borders, no bleeding on teasing.

8. Syphilitic scars are soft, atrophic, often of cigarette paper type.

DERMATITIS VENENATA

Dermatitis *Rhus toxicodendron* or, as it is commonly called, dermatitis venenata, presents a morphologic picture quite distinct from common vesicular eczema:

1. Vesicles are always discrete, much larger than in eczema.

2. The early lesions are located on the exposed parts of the body, such as face, neck, arms, and legs.

3. Affected parts are often edematous.

4. Vesicles are mostly broken open by scratching.

5. A most characteristic trait—The vesicles often run in linear streaks, following lines of traumatic irritation and scratching.

EPIDERMOPHYTOSIS

The group of skin lesions covering an enormous clinical domain is presented by epidermomycosis of epidermophytosis type. The morphologic traits and clinical forms of epidermophytosis are very characteristic.

1. Most common lesions are vesicular and squamous of interdigital spaces of the feet, hands, palms, and plantar surfaces.

2. Next in frequency—Round, circinate or discoid patches in the groins, face, and the trunk.

3. Patches are always sharply defined, round or circinate in shape.

4. Vesicles are mostly broken open by scratching and leave a turned up scaly edge—so-called "epidermal collarette."

5. Vesicles are deeper and larger than eczematous, occur in clusters and spread at periphery.

6. Important differential feature—In mycotic eczemas desquamation is a much more pronounced feature than infiltration; while in nonmycotic eczemas just the opposite—the infiltration is more pronounced than desquamation.

7. The tendency to a clearing center or, at least, to a greater activity on the edges than in the center (marginal activity).

PITYRIASIS ROSEA

It is advisable for practical reasons to include here pityriasis rosea, a mild and harmless dermatosis, seemingly caused by an as yet unidentified fungus. Strangely enough, it is commonly un-

recognized and taken for secondary syphilid, food rash, or nervous eruption. Yet its morphologic syndrome is remarkably constant and characteristic.

1. As a rule, symmetrical involvement of the trunk and the limbs up to the neck and down to the knees, following "bathing suit" distribution.

2. The lesions are well-defined, circinate, with elevated scaly edges.

3. Lesions are of buff, tawny salmon color, superficial.

4. The primary—mother or herald patch—is usually the largest.

5. The itching is often intense.

6. Duration is seldom more than six weeks; hardly ever recurs.

SEBORRHOIC DERMATITIS

Because of the strong pictorial resemblance with mycotic dermatoses and pityriasis rosea, seborrheic dermatitis can be conveniently considered here. Its morphologic traits are:

1. Superficial, heavy, oily, yellowish, easily removable scales or crusts.

2. Sharply margined, annular or circinate patches.

3. Primary involvement of the scalp, creeping down over the hairline.

4. Sites of predilection—Forehead, nasolabialfold, eyebrows, sternal region, interscapular region.

STREPTODERMATA

Superficial streptodermic infections, because of their wide dissemination and high incidence in general practice, merit a study of their morphologic picture.

The primary bullous type, commonly known as impetigo, is too well known to call for a portrayal; it is the secondary pyodermata so often invading eczematous patches that are commonly overlooked. Morphologic traits of streptoderma are:

1. Large vesicles and bullae which break open so early that they are but rarely found.

2. Well defined, round or circinate moist, very superficial deep red patches, often with thin epidermal fringe, the remnants of a bulla.

3. An important characteristic of streptoderma—Serous exudation drying up into heavy superficial crusts.

4. Very contagious, spreading on the periphery, through contact and self-inoculation.

SYCOSIS BARBAE VERSUS TINEA SYCOSIS

These are two infectious dermatoses of clinical importance which resemble each other in general appearance. Their morphologic differentiation is:

Sycosis barbae—*staphylogenous*:

1. Deep follicular pustules and abscesses limited to the hairy parts pierced in the center by a hair.

2. No alopecia, unless hair is pulled out deliberately.

3. Hair extraction is painful.

4. The end of an extracted hair shows pussy discharge.

5. The hair shows normal luster, gloss and lubrication.

6. Slides and cultures show staphylococci.

Tinea barbae—*trichophytica*:

1. Soft, boggy, purplish, nodular growths and scaly patches on the hairy parts.

2. Patchy, spontaneous alopecia and hair stumps.

3. Hair—dry, lusterless, lifeless.

4. Hair pulled out painlessly.

5. The end of the removed hair shows dry dusty deposit or glairy mucopurulent discharge.

6. Slides and cultures show fungi trichophyton.

PSORIASIS

Psoriasis in fully developed and typical cases is easily recognized even by the beginner, but there are many atypical and abortive cases which are easily unrecognized unless carefully differentiated. Its morphologic traits are:

1. Localization—Preferentially extensor surfaces: knees, elbows, scalp, back, exceptionally on the palms, groins, penis.
2. Silver-white, profuse, mica-like scales, pathognomonic, if present.
3. Dry, scaly, thickly infiltrated—deep and diffusely—throughout the whole patch.
4. On scratching readily raised silver-white scales and papillary hemorrhages.
5. Chronic cases commonly do not itch, but acute may itch intensely.
6. Color is pale pink, white or angry deep red, but never dusky red or violaceous.
7. May be annular, but even then irregular in shape—not circinate or serpiginous.
8. Psoriasis is often associated with seborrhea on the scalp, in which cases seborrhea is superimposed on underlying psoriasis.

LUPUS ERYTHEMATOSUS

Lupus erythematosus is not an uncommon dermatosis, yet it is often missed because of the unfamiliarity with its morphology, which is both very constant and typical:

1. Sharply defined dry, discoid patches thickly infiltrated.
2. Localized preferentially on the face, ears or scalp in chronic cases.
3. Patches mostly of irregular shape, unilateral or bilateral, at times butterfly formation.
4. Patches are dry and rough to the palpating finger.
5. Scant, tightly adherent scales and stippling effect due to patulous follicular ducts.
6. Central pale depressed area due to a superficial atrophy is observed in old patches.
7. On the scalp it tends to produce soft atrophic patches of alopecia.
8. Itching is not uncommon.
9. Persistency of duration and localization.

LICHEN PLANUS

Another dermatosis far from being rare, yet but rarely recognized in spite of its very constant morphologic traits:

1. Discrete, polygonal, violaceous, dry papules, waxy and shiny looking, intensely itchy as a rule.
2. Papules may coalesce into patches, yet retain their individual outlines.
3. Located preferentially on the flexor surfaces—fore arms, legs, penis, thighs, abdomen, occasionally generalized over the whole body.
4. Lichen papules often occur in streaks and following the lines of scratching and traumatic irritation.
5. It may occur in the mouth as milky white, discrete papules simulating leukoplakia.

ERYTHEMA MULTIFORME

Erythema multiforme, as indicated by its name, is one of the manifold skin reactions to a systemic infection or toxemia. Its morphologic traits are:

1. May be macular (diffuse erythema), papular and bullous separately or combining all three types in one.
2. Papular type preferentially localized on the back of the hands, neck, and frontal aspect of the legs.
3. Papular lesions are large, umbilicated in the center, soft edematous and deep red or purplish in color.
4. Often combined with urticarial lesions.

(To be continued)

CARONIA VACCINE IN TREATMENT OF PARATYPHOID B

REPORT OF CASE

By ROBERT A. STEVEN, M. D.
San Francisco

CARONIA,¹ in 1917, reported on a lyzed vaccine which he had prepared for use in treating cases of typhoid and paratyphoid infections. The technique of preparation is as follows: Stock cultures of paratyphoid A, paratyphoid B, and typhoid are separately grown in broth media, after which the cultures are pooled. Two per cent by volume of whole blood from a person with a high agglutination titre for typhoid bacilli is then added, and the mixture incubated until all the organisms are lyzed. This is then centrifuged, and the clear supernatant fluid drawn off, phenolized and put in ampoules for use.

This vaccine has been extensively used by the Italians in typhoid and paratyphoid infections, but has not been generally used in America.

De Grazia² reported on a carefully studied series of one hundred and twenty hospital patients treated with Caronia's vaccine. Of this group, fifty-nine were typhoid, forty-five paratyphoid B, and fourteen paratyphoid A. He stated in part: "It is rare that dangerous effects are produced. Its use shortens the course of the disease, or attenuates the symptoms, so that the patients do not enter convalescence in a cachectic condition. We can say that there is a sudden stimulus to the defensive mechanisms of the body, since there is a leukocytosis. Similar reactive manifestations were obtained in those cases treated with *B. coli* or staphylococcus vaccines. We should not jump to the conclusion that the results with the Caronia vaccine are entirely due to nonspecific protein. Probably there is some specific as well as non-specific action with the latter. This vaccine should be the treatment of election in typhoid."

REPORT OF CASE

M. L., a boy of twenty-three, had been ill for nine days when I saw him at his home on August 25, 1931. His symptoms had been anorexia, nausea, vomiting, high fever, drenching perspiration, severe lower-back ache, mild headache and general abdominal soreness. He had called another physician five days before who had diagnosed his disease as influenza. These symptoms had been increasing in severity over the nine-day period.

Previous history disclosed that there had never been any inoculation against diphtheria or typhoid, but otherwise was noncontributory.

Physical examination gave the following positive findings: The conjunctivae were markedly injected; there was a heavy grayish-brown coat on the tongue; there was some odor to the breath; the throat was normal in color and did not appear to have been recently inflamed; the gums were red, spongy and bled easily, almost as in scurvy; there were no palpable lymph nodes. The heart and lungs were normal; blood pressure was normal; the upper recti were moderately rigid, which I thought was due to continued vomiting, otherwise the abdomen was negative. The spleen was not palpable, but the area of splenic dullness was increased. All the reflexes were hyperactive; there was a coarse tremor of the hands and some pallor. On

the right arm were two dull, red spots, the size of pin-heads, the color of which did not fade with pressure. These were gone the next day.

The patient's serum, taken on August 26, failed to agglutinate *B. typhosus*, *B. paratyphosus* A, *B. paratyphosus* B, *B. enteritidis*, *B. abortus*, or *B. melitensis*. On August 27, sterile ox-bile, glucose, veal broth, hormone broth, and glucose brain broth were each inoculated with five cubic centimeters of whole blood from the patient. A heavy growth was present in the first in twenty-four hours, and in each of the others in forty-eight hours. The organisms were Gram-negative rods. An antigen made from this culture was agglutinated by paratyphoid B antiserum in a dilution of 1:2560, and by typhoid and paratyphoid A antisera in a dilution of 1:40. The patient's serum, taken September 1, agglutinated *B. paratyphosus* B in a dilution of 1:25, but failed to agglutinate *B. typhosus* and *B. paratyphosus* A.

On September 1, the patient was given intravenously 0.2 cubic centimeter of Caronia vaccine (obtained from Dr. Karl Meyer's laboratory at Hooper Foundation, University of California), preceded by 1.0 cubic centimeter of a 1:1000 solution of adrenalin. The immediate reaction was alarming. The patient complained that his chest was in a vise, that he could not breathe and was going to die. His lips and fingertips became dark blue, almost black. This reaction wore off in a few seconds. There was no chill. The further course of the temperature can be seen by reference to the accompanying chart. On September 3, the patient shaved himself and complained that he could not get enough to eat. From this time on he felt fine and ate heartily, and to all appearances was perfectly well. He has remained so since.

A single stool culture, taken September 19, was negative. The urine was not cultured. The spleen was never palpable, and no rose spots ever were seen, though they were searched for daily.

COMMENT

It is seen that convalescence began on the twentieth day of the disease. It is possible that the same thing would have occurred without the vaccine.

The reaction from the vaccine, to all outward appearances, was certainly that of foreign protein introduced into the blood stream. The leukocytosis in De Grazia's cases is probably explained in this way. We are not convinced that all the results claimed for this vaccine are not due to foreign protein. The immune bodies introduced

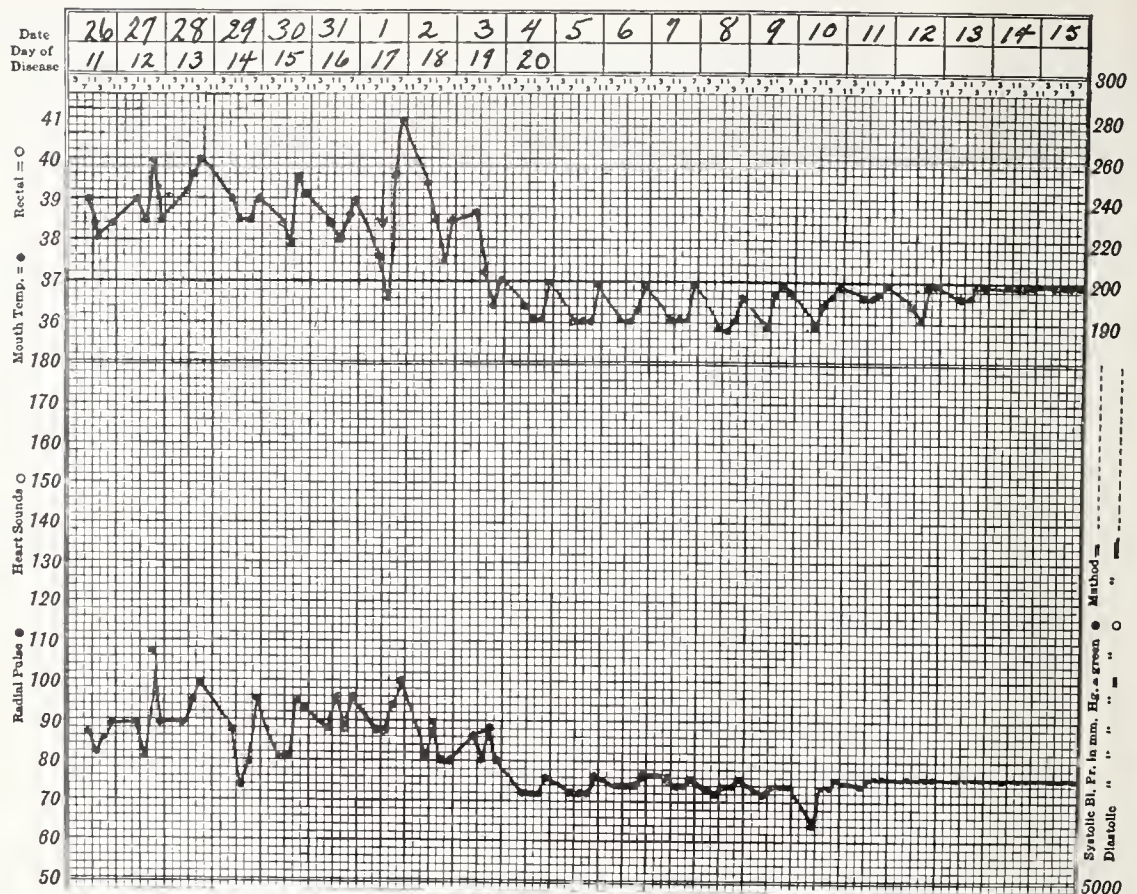


Fig. 1.—Temperature graph. Arrow below 1-17 shows when vaccine was given.

may, however, as De Grazia suggests, be responsible for part of the good results reported.

384 Post Street.

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THE USE OF COPPER IN ACNE

By H. H. PARSONS, M. D.
San Bernardino

DURING 1930-1931, in an effort to find a suitable copper preparation which could be used parenterally in the treatment of actinomycosis, I made about fifty organo-copper compounds and, while these appear to be about equally efficient therapeutically, I have chosen para-acetophenetidin copper for use, as it seems to be less painful than the others when administered intramuscularly.

While treating a patient with this preparation for another complaint, I noticed that the acne which she had disappeared, hence I was led to try it on other cases of acne. As the results have been so striking, I would like to see it given an extensive trial.

Most of the cases treated have been of the vulgaris type with deep pustules, papules, and in some cases small abscesses, and in all many old scars. They have all been refractory to other types of treatments. In these cases I have found it necessary to open the deep indurated pustules and express the contents. I also combine the copper treatment with one of autogenous vaccine, which seems to aid. The papular cases clear more readily.

Para-acetophenetidin copper is put up in glycerin base, so that one cubic centimeter contains approximately one-sixteenth grain of metallic copper, and this is an average dose. The injections should be given every four to five days intramuscularly in the gluteal region. As the glycerin is thick, it is best to draw it into the syringe before the needle is applied.

The lesions usually begin to disappear after the third or fourth injection, and ordinarily twelve injections suffice to clear the ordinary case, but in one case I found it necessary to give thirty-two injections, as the eruption would reappear in mitigated form at each catamenial period.

No untoward effects have been observed from the injections, but they are painful, the patients complaining of a dull ache extending down the leg, and this may persist for several hours. Occasionally the injections are painless. No indurated areas have been observed.

In addition to its more or less local action, copper seems to act as a tonic, possibly due to its catalytic action. One patient gained eighteen pounds in two months following a few injections, and refused further treatments on that account. Others have refused to continue treatment on account of the pain, and in these I have injected novocain previous to the copper injection. The combining of copper chemically with any of the known local anesthetics makes them lose their anesthetic properties. The writer of this report will send the name of the makers of this preparation to any colleagues who are interested.

Fox Theatre Building.

SUBPHRENIC ABSCESS—WITHOUT PREVIOUS OPERATION

REPORT OF CASE

By PAUL J. BOWMAN, M. D.

AND

HOMER H. WOLFE, M. D.

Fort Bragg

D. M., male, age thirty-two, was brought 175 miles over bad roads for treatment on April 7, 1932.

History.—One week previously (April 1) at 4 p. m. he began to have severe cramps in his abdomen. They continued to get worse and about 6 p. m. localized more definitely in the epigastric region. His family physician was called and a narcotic given. He vomited several times during the night, at which time the pain would get worse for a while, radiating to front of right side of chest and to right back. By noon of the following day the pain gradually subsided, leaving an extremely painful, swollen right epigastrium and hypochondrium. He had taken castor oil and bowels were acting freely. He now has pain on deep breathing or on movement. There is also noctidrosis. Past history was negative except for attacks of "indigestion" over a period of ten to twelve years.

Examination.—Temperature was 100.2, pulse 84. Short, rapid breathing and the appearance of a very sick man. No jaundice. There was dullness in chest, anteriorly, from fourth rib to three centimeters below costal margin; posteriorly, flatness from angle of scapula down. No breath sounds over right lower lobe. Increased breath sounds on left side of chest. There was a very sensitive, slightly swollen area in right epigastrium. The lower abdomen was soft and

not tender. White blood count was 14,500 with 75 per cent polynuclears. Urinalysis was negative. Fluoroscopic and radiographic examination showed right side of diaphragm much higher than normally, with no perceptible movement. There was no change in density above the diaphragm. The lung fields were normal in appearance. A diagnosis of subdiaphragmatic abscess, most likely resulting from an acute perforative gastric ulcer, was made and operation advised.

Operative Findings.—In considering operative treatment the best method of approach was discussed and, because of the strong probability of "pointing," it was decided to follow the abdominal route and incise over the sensitive, swollen area in the right epigastrium. The right rectus muscle was retracted outward and the falciform ligament was directly under the incision. There was no bulging here, however, and probing did not disclose any discharge. On further examination, on the lesser curvature of the stomach was found a perforated gastric ulcer, well sealed with fibrinous exudate, apparently healing well. The gall-bladder was normal. While exploring this region with the gloved hand, following along the gall-bladder sulcus up to and over the edge of the liver, a finger penetrated an abscess cavity covering the whole right dome of the liver. There was a gush of sanguinopurulent fluid with some odor. After evacuation of this fluid, one spit rubber drainage tube was inserted over the dome of the liver and another to the lesser gastric curvature. The general peritoneal cavity had been more or less excluded by the transverse colon and mesocolon. The operative wound was closed in layers around the drainage tubes.

Postoperative Course.—This was uneventful, the temperature remaining normal after the fourth day, when the drainage tubes were removed and all drainage stopped after the twentieth day. He was discharged from the hospital on the twenty-fifth day. Since his discharge from the hospital he has been on a restricted convalescent ulcer diet. On June 16, 1932, his weight was 128½ pounds, his best previous weight having been 134 pounds. Fluoroscopic examination showed good excursion of right diaphragm and he has made a complete recovery.

Comment.—The majority of cases of subphrenic abscess reported have been postoperative. This is an exception. This case is also interesting in that the acute perforative gastric ulcer healed without operation.

615 North Main Street.

Vitamin D Milk.—Important problems in milk control were discussed at a meeting of the New York Department's Advisory Committee on Milk Sanitation, held in Albany on October 13. The subject of vitamin D milk was considered at length. The vitamin D content of milk fat can be materially increased by several measures, the simplest and most practical being (1) the feeding of irradiated yeast to cows, and (2) the addition to the milk of a special concentrated cod-liver oil. Both of these procedures are patented, each patent being held by a teaching institution.

Much is claimed by the organizations selling vitamin D milk for the value of this product in special cases. Thus far, little knowledge is available as to the possible deleterious effect upon normal persons of a steady diet high in vitamin D. The committee recommends that for the present and until further information is obtained, the department take a neutral position, with the understanding that dairymen or milk dealers who have adopted these procedures be given no assurance that their continued use will be permitted. At the present time a small amount of "certified" vitamin D milk to which the vitamin is added by the feeding method is being sold in New York State.

BEDSIDE MEDICINE FOR BEDSIDE DOCTORS

An Open Forum for brief discussions of the workaday problems of the bedside doctor. Suggestions of subjects for discussions invited.

BOILS AND CARBUNCLES, WITH SPECIAL REFERENCE TO TREATMENT

MERLIN T. R. MAYNARD, M. D. (Medico-Dental Building, San Jose).—Boils and carbuncles are daily occurrences in the life of the average physician. They are diseases met with in all specialties, as for example, an hordeolum of the eyelid, a pustule in the external auditory canal, an infected vibrissa of the nares, a pararectal abscess, or as a lesion found here and there on the surface of the skin.

Because of their pathologic differences, boils and carbuncles present slightly different problems in management. Symptomatically they may vary greatly. In the early stages of carbuncles a large amount of tissue is killed and the leukocytic action is repelled. The bacteria are allowed to work in the interior of the necrosed mass unmolested by leukocytes. The inhibition of the leukocytic action delays separation of the slough considerably.

In the boil the situation is rather different, the leukocytic action is quickly organized and a line of demarcation rapidly develops to form the usual single core. These differences between a carbuncle and a boil require some variations in management. The time-honored treatment of a boil and carbuncle has been that of the application of hot compresses until pus appears, following which they are incised and drained. The average case does relatively well on this procedure and is terminated according to the defense mechanism of the patient.

The present-day surgical school, as regards treatment in carbuncles believes in radical excision of the entire necrotic mass. Skin flaps are left to heal over the raw area; the resultant scar is moderate but rather ugly. Boils are simply incised and the core removed when it has separated.

The dermatologic school is probably more conservative, and although my viewpoints may not apply to dermatologists as a whole, I believe they do for the majority.

In the hands of the dermatologist the x-ray treatment of the indurated area of boils or carbuncles has proved an active weapon in treatment. One skin dose of x-ray is given and in twenty-four to forty-eight hours it is a common experience to find the infection subsiding.

Nonspecific protein stimulation of leukocytic action has been an extremely valuable adjunct to treatment. An injection of milk protein into the muscles in from five to ten cubic centimeter doses usually brings a softening of the lesion within twenty-four hours. From adequate personal experience, I feel that I can highly recommend this combination of x-ray and nonspecific therapy.

In the event of failure of the above procedure, compressing methods and possible surgical excision are usually carried out. However, in the past eight years of practice, I have not found it necessary to excise a single carbuncle. I wish to mention bacteriophage therapy because of its recent prominence. I have found little use for bacteriophage treatment, but largely because of the necessary loss of time in procuring the specific 'phage. Very often this is not available and the loss of money and time is considerable. I grant, however, that the clearing up of boils and carbuncles from the use of specific bacteriophage is very striking.

To sum up, my usual advice in regard to treatment of boils and carbuncles is the application of one skin dose of x-ray, accompanied by foreign protein injection. In the event of failure, surgical procedures are necessary.

To mention chronic furunculosis, of which so much is heard in general practice, I would like to state that in no case of recurrent boils has any procedure been necessary aside from the removal of the possibility of unclean skin and infected fomites, and I feel I can definitely state that except in the presence of pyemia or similar contributing focus, the use of vaccines or other procedures than antisepsis has been unnecessary.

With this end in view I prescribe antiseptic washes, antiseptic of the household contacts, and the complete cleaning and fumigation of all clothing that has come in contact with infected skin.

* * *

E. W. SCHULTZ, M. D. (Stanford University).—*Serum Therapy.* The use of specific antiserum in the treatment of boils and carbuncles has at no time occupied a position of importance, despite the fact that in acute infections the use of antiserum is more logical than is the use of a vaccine. While antisera, potentially at least, bring to the patient immune substances ready to serve in an emergency, the virtue of a vaccine rests solely in its capacity to stimulate active immunity. An active immunity, however unlike passive immunity, is something which is generally acquired slowly, and therefore cannot be counted on to meet the needs of an existing emergency. The chief value of vaccines, therefore, rests on their prophylactic rather than curative effects. While in furunculosis the main object of vaccine therapy is the prevention of new lesions, in carbuncles the logic of using a vaccine as a therapeutic measure is not so apparent. Here the use of a specific antiserum would seem more to the point. But while antisera theoretically offer the more logical approach we face the *plain fact that really effec-*

tive antisera against the causal agents here have not become a practical reality. Though a few clinical investigators believe they have demonstrated virtues in the use of antisera (also following the injection of the patient's own serum in the region of lesions) it is not clear that the results which have been realized rest on anything more than a nonspecific action. While such nonspecific stimulation may be of value, especially in instances in which the residual immunity has not dropped too greatly below the actual needs of the patient, such effects may, as is well known, be realized following the injection of a variety of foreign proteins. Indeed, in the use of any therapeutic agent, especially those incorporating foreign proteins, it is not easy to separate the specific from the nonspecific therapeutic effects. Something regarding the mechanism of recovery following nonspecific protein therapy is revealed by the fact that the antibody titer for a given organism may be definitely raised following the injection of unrelated foreign protein into previously immunized laboratory animals in which the concentration of specific antibodies has been allowed to decline to a low level. In the face of a preëxisting specific immunity, therefore, nonspecific foreign proteins have an effect comparable to a poker applied to a fire about to die out. But just as stirring a fire may live it up somewhat, to get a really lively blaze additional fuel is necessary. In the realm of immunity this additional fuel is supplied in the form of a vaccine.

Vaccine Therapy.—The present status of vaccine therapy in boils and carbuncles seems to be well pictured in a recent publication by Hektoen and Irons (1929). The report is based upon results of a questionnaire designed to elicit information as to the general use of vaccines. We are, however, concerned here only with information relating to the use of vaccines in the treatment of furunculosis and carbuncles. It is of interest that of the total number of physicians to whom the questionnaire was directed, only a third used vaccines of any sort in the treatment of furunculosis. It is also of interest that less than half of those who used even the more favored autogenous vaccines actually regarded their results as "good"; the remainder felt the results were "variable" or essentially "negative." Whatever the truth may be as to the potential merits of vaccine therapy in furunculosis one cannot escape the impression that vaccine therapy, even in its most acceptable application (furunculosis), has slipped somewhat from its former position, in the esteem of the profession. This may be due, as Keilty (1930) and others have pointed out, to the use of unsuitably prepared and improperly administered vaccines; or may in reality rest on a natural limitation of this form of therapy. It must be admitted that even in the face of the liberal trial which vaccine therapy has received, it is difficult to point to proof that vaccines possess specific therapeutic virtues even in furunculosis. That vaccines benefit some patients cannot be denied, but that the recoveries are always clearly related to specific rather than nonspecific stimulation, is

not so clear. As regards the administration of vaccines, more emphasis should probably be placed on multiple intradermal, as against the more massive subcutaneous injections of the vaccine.

In carbuncles the use of vaccines does not appear a sound therapeutic procedure, and in principle is not to be recommended.

'Phage Therapy.—The use of 'phage in the treatment of boils and carbuncles dates from 1921, at which time excellent results were reported on a small series of cases by the Belgian investigators Bruynoghe and Maisin. About the same time Gratia of the Pasteur Institute in Brussels reported excellent results on about fifty cases. Since then a number of reports on the results of 'phage therapy in boils and carbuncles have appeared in the literature, several of them based on respectable numbers of cases. Especially noteworthy are the more recent reports of Larkum (1928, 1929), Rice (1930), Alderson (1930), Crutchfield and Stout (1930), though a well-defined enthusiasm runs through all the papers published to date. While there has been uncertainty as to the actual merits of 'phage in some types of infection, the results in the treatment of boils and carbuncles have been sufficiently outstanding to warrant continued interest in the possibilities of 'phage therapy in general. True, not all the cases reported have responded to 'phage treatment, but the number in which no therapeutic results are realized is certainly not large. According to the results reported in the literature at least 75 per cent of the cases may be expected to respond when a suitable 'phage is employed. This harmonizes well with the results which have been reported to my laboratory to date by physicians to whom we have supplied 'phage for therapeutic trial. The superiority of 'phage over vaccines in furunculosis seems evident not only on the ground of a higher incidence of recoveries (if we may in a spirit of liberality place the results of vaccine therapy at between 50 and 65 per cent), but also by the fact that good results have been reported by 'phage treatment after vaccine therapy failed (Larkum, 1929; Crutchfield and Stout, 1930, etc.). That the results are not due primarily to nonspecific effects nor to a Besredka "antivirus" effect seems apparent from results which have been reported bearing on the superior merits of well chosen as against poorly chosen 'phages. Standards for 'phage products generally still need to be worked out.

While vaccines cannot be said to represent a logical therapeutic measure in the treatment of carbuncles, 'phage therapy, because of its *immediate virtues*, may be accepted as a thoroughly sound procedure. Moreover, the results with this form of therapy are generally regarded as exceedingly good.

As regards the mechanism of 'phage action, it is altogether possible that the therapeutic effects of 'phage do not rest altogether on a direct bacteriolytic action which it may exercise, but in part at least on other effects of some importance.

It has, for example, been shown by a number of investigators that specific 'phages may exercise an opsonin-like action on pyogenic cocci. By such action 'phages may greatly facilitate phagocytosis. Evidence of such an effect is frequently observed clinically in the more marked purulency which often marks the rapid regression of acutely inflamed lesions. While the immediate effects of 'phage are important, especially in the treatment of carbuncles, its potential immunizing properties must also be considered. This is particularly true in treating furunculosis. In this connection it may be stated that although the bacteria in a culture may appear to be completely dissolved a certain residue of undenatured bacterial protein almost invariably remains. The residue, if we may judge from the results which have been realized in furunculosis, is apparently sufficient to stimulate the active immunity heretofore sought with the aid of specific vaccines. We may say, therefore, that a 'phage lysed bacterial culture may be regarded as a dual agent possessing both specific therapeutic and specific prophylactic properties. That the mixture may also exercise a nonspecific therapeutic action because of the foreign proteins represented, of course, cannot be denied.

The choice of 'phage for therapeutic use is important. While it is now possible to supply stock staphylococcus bacteriophage mixtures active for approximately 90 per cent of staphylococcus strains, the best results are naturally to be expected with 'phages regenerated at the expense of the strain actually responsible for a given infection. Several clinical investigators (Rice, Larkum), however, claim excellent results with stock preparations. When an autogenous 'phage is desired, the exudate must be carefully plated to insure discrete colonies, and five or six individual colonies should be transplanted to as many agar slants and these sent to a laboratory prepared to carry out 'phage-susceptibility tests.

In carrying out 'phage treatments on cases of furunculosis, probably the best procedure is to administer the 'phage intradermally with a small needle (26 gauge, one-half inch) attached to an ordinary tuberculin syringe, approximately 0.2 cubic centimeters being administered near the base of individual lesions. A total of one to two cubic centimeters may be distributed in this way at a single treatment. The treatments may be repeated at intervals of two or three days, if necessary. The 'phage may be administered subcutaneously in a single dose of one to two cubic centimeters, but intradermal injections near individual lesions should be given preference. In the treatment of carbuncles it is seemingly the better practice to inject about two cubic centimeters of 'phage, in divided doses of about 0.2 cubic centimeter amounts intradermally, immediately around and into the lesions. The treatments may be repeated in twenty-four hours. 'Phage-soaked compresses may be applied to open lesions.

From the patient's standpoint, 'phage therapy should be appreciably less costly than vaccine therapy.

JOHN HUNT SHEPARD, M. D. (Medico-Dental Building, San Jose).—*Surgical Treatment.* Since a carbuncle is a close grouping of boils of approximately the same age, though usually extending deeper into the areolar tissue, with a coalescing of the areas of induration, the underlying principles of treatment are the same for both.

Their etiology is the penetration of a hair follicle or sebaceous gland by the staphylococcus and the small superficial infection of a hair follicle and the extensive carbuncle differs only in degree and not in kind, as regards the pathologic process.

The defense wall of leukocytes and endothelial cells which nature builds around this type of infection causes a venous stasis with a localized central area of moist gangrene, which is eventually cast off as the core, allowing free drainage with prompt subsidence of the inflammatory process.

Being familiar with the life cycle of boils, surgeons have long attempted to shorten their course by early free incision and at times by rather wide excision, especially in the treatment of carbuncles. This practice is often necessary when the surgeon is consulted, but had proper treatment been given in the early period of the infection such radical surgery would seldom be required.

On account of the irregularity and undeterminable size of the local area of necrosis, it is impossible to remove the involved area surgically without sacrificing some healthy tissue and opening new avenues for systemic infection. The radically inclined surgeon follows the practice of early wide incision or excision, while the timid surgeon makes but a small opening and attempts to express the pus by pressure. This latter practice is usually more harmful than beneficial, for by so doing, nature's barrier—the wall of leukocytic and round-cell infiltration—is disturbed, allowing further systemic absorption.

Unfortunately the public does not view a boil as a potentially serious condition. "Just a little boil," unworthy of a doctor's attention, is the common attitude. Home treatment, consisting of some form of poultice, is applied and when the surgeon is consulted the condition is usually no longer a simple boil but a more or less complicated mixed infection, each case requiring individualized treatment.

When a boil is seen in its early uncomplicated state, an area of skin of not less than two inches in diameter should be thoroughly sterilized by the use of three and one-half per cent tincture of iodine. The hair from the infected follicle should be removed, and an alcohol compress applied for one hour. The chief value of the alcohol compress is to remove the excess of iodine to prevent damage to the skin from the subsequent use of a 1 to 3000 HgCl₂ hot compresses. This favors localization of the process and tends to prevent infection of other hair follicles through contamination.

If the pathologic process is somewhat farther advanced when first seen, after the hair is removed a drop of phenol may be injected into the follicle, using a very fine needle, or a single punc-

ture, using a fine Von Graffe scalpel, may be made, followed by the hot HgCl_2 compresses.

If a central area of gangrene is present, a definite core already formed, a small crucial incision should be made followed by swabbing out the space about the core with iodine, on a small cotton applicator. This hastens separation of the core and provides for free discharge. One should not be too anxious to remove the core, for undue trauma often causes an extension of the infection.

If the process is not seen until there is extensive necrosis or multiple centers of infection—that is until a true carbuncle exists, each center of infection must be treated individually—ever bearing in mind the pathologic process and refraining from opening new avenues for extension of the infection.

The successive development of one boil after another in the immediate vicinity of the primary one is due to lack of continuing the antiseptic dressing until all purulent discharge has ceased. The use of ammoniated mercury ointment in place of a less antiseptic ointment or vaselin as terminal dressing prevents many subsequent boils.

The successive development of boils in other areas of the body is due to lack of immunity against the staphylococcus and is one of the most difficult conditions with which we meet. The use of vaccines, foreign protein, the intramuscular injection of the individual's blood serum, the administration of calcium, iodine, iron, and arsenic have been used with varying degrees of success.

In conclusion, let me urge conservatism in the surgical treatment of boils, and also most meticulous care and attention to the antiseptic treatment of the involved area.

Worry Over Diet Often Causes More Indigestion Than Foods.—In a recent public health lecture, Dr. C. J. Barborka of the Mayo Clinic, Rochester, Minnesota, deplors the tendency of the public to listen to the cultist. He states:

"It has been generally believed by the laity that the successful treatment of many diseases depended on diet. In the prevention of conditions characterized by degenerative changes affecting the heart, arteries, and kidneys prior to the stage of chronic disability, much may be accomplished by proper diet. That a change in diet may be followed by cure, as many believe, in conditions already characterized by progressive tissue changes affecting the arteries, heart or kidneys is remote. In general, the kind of advice most needed for adult patients refers more to the quantity of food taken rather than to quality.

It is true that in deficiency diseases, obesity, malnutrition, diabetes, pernicious anemia, gastric and duodenal ulcers, and gout, diet is of paramount importance. However, apart from conditions where diet is of importance in relation to disease, we would rather hold to the simple fundamentals of diet for the average normal adult and not follow the fads where a distorted partial truth directs one into misleading statements.

Fads and fancies in diet are the result of misinformation fostered largely by cultists. The faddist finds just as fertile a field in telling us what we should eat as in attempting to make us beautiful or young, or anything else that we are not and that nature never intended us to be. Rejuvenation is simplicity itself in the hands of the beauty specialists and food faddists.

In discussing diets, I would begin by dividing all foodstuffs into three main groups—proteins, carbo-

hydrates, and fats. In addition to these substances the body requires water, vitamins, and certain minerals such as iron, calcium, and phosphorus.

The protein foods are utilized for building up the body tissues. They comprise meats, fish, eggs, cheese, milk, and such vegetables as peas, beans, and lentils. The carbohydrate group creates energy and heat for the body. In it are included the fruits, vegetables, sugars, and starchy foods such as white bread, potatoes, rice, macaroni, and cereals. Fatty foods are likewise required to create heat and energy. Those chiefly used are cream, butter, olive oil, nuts, and fatty meats and fish.

The minerals required by the body, such as iron, calcium, and phosphorus, are found in milk, cheese, egg yolk, and many of the vegetables, particularly lettuce, asparagus, spinach, cauliflower, peas, beans, tomatoes, and carrots. The major part of our diet should be made up of the vegetables, fruits, and cereals. Their food value lies in their carbohydrate content and in their vitamins and mineral salts. The cellulose they contain furnishes the bulk so essential for proper function of the intestinal tract. This principle is exaggerated today, however, because of the popular roughage fad.

Vegetables, fruits, and salads contain much cellulose and for this reason, if for no other, they are required in reasonable amount in the daily menu. But we are besieged from all quarters to eat more roughage. Bran was the forerunner of this fad. While bran has some food value because of its vitamin content, its indiscriminate use as roughage to stimulate intestinal peristalsis is not to be recommended. An excess of roughage, because of its bulk, does not permit the ingestion and assimilation of other foods necessary in securing a well-balanced diet. Furthermore, much of the constipation seen today is of the spastic type in which there exists irritability and spasm of the bowel. Obviously, in such cases too much roughage aggravates the condition, since the excessive stimulation increases the irritability.

Movement to Modify the Abortion Law.—A body of so-called new women who are always leading the van in questions concerning women, visited the home minister in the name of the Association for Reformation of the Abortion Law, in order to hasten the amending of the present law. They declare that the law, made fifty years ago, hardly complies with the need of the nation now and that an amendment is necessary. Their proposed bill would officially permit abortion in the following cases: (1) if conception was caused by violence, threat or fraud; (2) if it can be determined that the embryo is infirm, mentally or physically; (3) if the birth would be a menace to the livelihood of the whole family, destitute at the time; (4) in case of divorce. The authorities seem to believe that such a radical change has little hope of realization. The present law prohibits abortion, unless a physician proves it to be absolutely necessary for the mother's health. Nevertheless, under financial depression and a surplus of population, criminal abortion is done secretly. A few weeks ago the department of home affairs notified the local governments to maintain strict supervision over advertisements of patent medicine, especially those which tempt women to commit criminal abortion. Difficult as it is, the reformation is thought to be only a matter of time. . . . —Foreign Letter Department, *Journal of the American Medical Association*, Vol. 99, No. 17.

Mean Temperature in Healthy Girls.—From observations made in a large boarding school for girls, Paton draws the following conclusions: 1. The normal (or ruling) temperature of girls of from fourteen to seventeen years of age is nearer 97.4 F. than 98.4 F. 2. Girls in whom the mean approximates to 98.4 F. are rare. 3. A temperature of 98.4 F. in the mouth is so suggestive of illness that it should not be disregarded unless no other disturbance of health can be detected. —*British Medical Journal*, July, 1932.

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a copy of this leaflet.

EDITORIALS*

GREETINGS FOR THE NEW YEAR

Fare Thee Well, 1932, and Welcome, 1933.—The year 1932 is now of those things that have come and gone. But the year 1933 is at hand and awaiting fulfillment. CALIFORNIA AND WESTERN MEDICINE extends to each of its readers best wishes for a year of satisfactory work in this year 1933. In times such as the present it is not possible to prognosticate with accuracy on matters economic. Members of the medical profession have, however, one advantage over many of their lay fellows in these days, in that physicians can at least have the joy of service even though proper financial rewards for the time may be lacking. If we are not as busy as formerly, we can give more time and study to the patients who do come to us; and we can also take up in earnest some of the reading on subjects in which we have special interest. If in our private and hospital and clinic practice we make the most of the extra time some of us now have, then the year 1933 when it comes to its close may be found to have been one of real value in preparation for the brighter days ahead,

* Editorials on subjects of scientific and clinical interest, contributed by members of the California Medical Association, are printed in the Editorial Comments column, which follows.

which are sure to come when the present clouds break.

* * *

The 1932 Work of the Component County Societies.—In retrospect, for the California Medical Association the year 1932 may be said to have been one that was marked by real progress. The component county medical associations have all been alert to their responsibilities. In addition to their usual devotion to scientific studies, California Medical Association members everywhere have displayed an increasing interest in developing the social relationships with their colleagues and in stressing studies in medical-economic matters. Institutions and organizations concerned with the public health are receiving special attention from the component county societies. All this bodes well for the morrow. The progress made in 1932 in these matters should be only the foundation for broader study and outlook during the year ahead.

* * *

State Association Activities.—In our state medical organization the activities have been carried on in efficient fashion by the officers and various committees. Special mention must be made of the excellent work done by the Committee on Public Relations and by the Cancer Commission. The preliminary reports already made by these two committees are most creditable and have added to the prestige of the California Medical Association. The work done by these two bodies should be an inspiration to other committees and members to take up their respective duties in equally aggressive and successful fashion. Mention must also be made of the Woman's Auxiliary to the California Medical Association which in its state and county units is functioning in excellent manner. The Woman's Auxiliary has made for itself a real place in California and, if its former wise policies are continued, should become one of the permanent activities of the California Medical Association.

* * *

The Year Ahead.—As to the year ahead, the future is always the future, with its glamour of work to be done and of efforts and missions to be fulfilled. We need worry little about the days after the to-morrows if we will do well all the tasks of our to-days. From reports that come to us from other portions of the United States, the physicians of California have fared as well as most and better than many of their fellows in other commonwealths. There is much public health and medical organization work still to be done in California. If we must make a New Year resolution at the beginning of this year 1933, why not let it be our determination to do our bit in making things better for our profession and our community? It will then follow that things will also be better for ourselves. With stout hearts, hard work and clear thinking, none of the immediate problems which face us should be impossible of solution. So once again, CALIFORNIA AND WESTERN MEDICINE extends greetings and good wishes for the coming year.

THE FINAL REPORT OF THE COMMITTEE ON THE COSTS OF MEDICAL CARE

The Final Report was Given Much Initial Publicity.—Excerpts from the final report of the Committee on the Costs of Medical Care were printed in the December CALIFORNIA AND WESTERN MEDICINE (pages 395-400). We trust they were of sufficient length to permit readers of this journal to orientate themselves on the conclusions reached by the committee of fifty, at the end of five years of studies which were carried on at a cost of almost one million dollars.

It is hoped that every county medical society in California and Nevada will instruct its secretary to order a copy of the complete final report, and that the county society committees on medical economics or special committees will be appointed to make studies and reports thereon.* In the preparation of such reports, county society committees should avail themselves of the information given in the official publication of the American Medical Association—the *Journal of the American Medical Association*. It may be assumed that until the next annual session of the American Medical Association, which will meet in June at Milwaukee, that many of the weekly issues of the national publication will have comment of interest on this report.

* * *

Criticisms by the American Medical Association. Readers of CALIFORNIA AND WESTERN MEDICINE may have noted that when the digest of the final report of the Committee on the Costs of Medical Care was released on November 30 most of the newspapers also printed excerpts from the *Journal of the American Medical Association* editorials which were to appear in the December 3 issue of that publication. Through the forethought of the American Medical Association authorities in providing these advance proof sheets, lay readers throughout the United States were given an opportunity to consider pertinent facts as taken from both the majority and minority reports. This action by the *Journal of the American Medical Association* was not received with great welcome by some of the proponents of the majority report, one news dispatch several days later stating that an organization had been formed to combat the criticisms made in the official journal of the American Medical Association.

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Excerpts from Some Newspapers.—The *Journal of the American Medical Association* of December 10 (page 2034) sheds some interesting sidelights on the forces at work in these efforts. It is gratifying to read in the official national publication the editorials from some of the leading newspapers of the United States and to note that criticisms similar to those of the *Journal of the American Medical Association* were made con-

cerning the final or majority report of the Committee on the Costs of Medical Care. A few paragraphs from some of these newspapers are here reprinted:

From the *Washington Star*:

. . . Of course, the plan is beautifully idealistic, but why not expand it to include all the other things about which the poor are worried? Why not socialize food and clothing, rent and fuel? Why not socialize education? Why not socialize the lawyers? Why not socialize the clergy? Let there be no mistake about it: If socialization of medical care is right and just, wise and useful, then, by the same logic, a general socialization of life likewise is defensible.

The report is published at a moment when the people are discouraged. It comes as a fruit of the depression. It may be right and it may be wrong. In either case, it is entitled to study. But such examination ought to be unprejudiced. There are two sides to the whole subject, and both should be considered. It should not be forgotten that the American people are the healthiest people in the world and that their ordinary state of well-being, culture, and prosperity was achieved under what is traditionally known as the American system of civilization, not the Marxian system.

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From the *Boston Evening Transcript*:

As a flight of fancy, the majority report of the Committee on the Costs of Medical Care may prove entertaining. It reads like a chapter in a book descriptive of the world conducted on a near-socialistic basis. . . .

Thereafter, it is reasonably safe to predict this report, like so many others that created excitement upon their appearance, will find place in a pigeon hole, for the time is not yet, if it is ever to arrive, when more than passing notice will be given to proposals to put the Government into medicine on a scale that would tend to make medicine a Government monopoly.

‘ ‘ ‘

From the *New York Herald-Tribune*:

. . . With the report itself there also appear two minority reports, the first with exceptionally heavy support, opposing every suggestion of "mass production." This has been given prompt and vigorous indorsement by the American Medical Association, and this has in turn elicited from Mr. Morris Llewellyn Cooke, the new chairman of the Wilbur committee, a public statement in which the spokesmen for orthodox practice are called a "bureaucracy" and denounced for "pussyfooting and compromising." Doubtless there is more of this to come.

Meanwhile the Wilbur report does lay itself open to suspicion by appearing to favor community or state support for what *The Journal of the American Medical Association* calls "medical soviets" and by making this suggestion overlap upon that of a contract or insurance system. It takes little imagination to see how state support for a kind of medical guild might grow into a political "racket," under which a professional hierarchy would control admission to the guild, the citizen taxed for its support would have no choice of doctor or treatment and the taxpayer's redress for inefficient or perfunctory service would involve something like a Seabury inquiry. The contract system itself is not new. It is pronounced a success in some parts of the world, but has yielded in others a fine crop of unethical practices, as "Minority Report No. 1" points out. Divorced completely from the idea of state support, the public might concede it the right to prove itself by experiment and experience, but not otherwise. . . .

. . . The imposition of such a system on the public by propaganda and legislative action cannot be too

* Copies of the Final Report of the Committee on the Costs of Medical Care, known as Publication 28, may be ordered from the University of Chicago Press, 5750 Ellis Avenue, Chicago, Illinois. Price per copy, \$1.50.

strongly discountenanced. There is no use saying that the Wilbur committee's system would not go this far, for bureaucracies are never satisfied with small degrees of control over individual liberties. The time to check the growth of such ideas is at their inception, which in this case is the immediate present, and we sincerely hope that the orthodox medical bodies will succeed in doing so.

‘ ‘ ‘

From the New York *Evening Post*:

The Wilbur Report.—The medical world and the world at large should be very wary about accepting the majority report of the Committee on the Costs of Medical Care of which Secretary of the Interior Ray Lyman Wilbur is the chairman. It recommends, as the *Times* briefs it, "socialization of medical care for the people of the United States, based on a system of group taxes and group payments, with community medical centers to provide complete medical service, both preventive and therapeutic, in return for weekly or monthly fees, in the form of insurance, taxation, or both."

We consider this program doubtful in wisdom. It is dangerous from the standpoint of the patient. It creates malingerers. It makes self-pitying hypochondriacs out of people who are free to go to a physician at any time without extra cost.

Secondly, it is bad for the physician. The best physician has been the highly individualistic "old country doctor." The worst has been the "company doctor." Secretary Wilbur's socialization plan seeks to turn the first into the second. . . .

‘ ‘ ‘

From the Philadelphia *Record*:

What's wrong with medical practice?

An eminent committee headed by Secretary of the Interior Ray Lyman Wilbur, arch-reactionary, has spent a lot of time and money trying to answer this question, and has succeeded only in out-Wickershamming the Wickershammers.

Characteristic of this topsy-turvy time, the conservatives have delivered a majority report which involves radical socialization of medicine under bureaucratic government control. . . .

. . . The *Record*, for one, has too great a faith in the intelligence and humanity of the medical profession to think that it cannot cure itself of what ails, after all, minor faults. This plea for socialization need not be taken seriously.

Advancement of medical science demands medical centers with equipment and specialists. But this does not necessitate Government subsidy and bureaucratic control.

Medicine must not be socialized.

* * *

The Medical Profession Should Be Informed.

The above excerpts indicate the great interest which is taken in this final report by newspapers and publicists. In the coming several years we may expect much magazine and other comment. Not all of it will be kindly disposed to the minority report or to the medical profession. The best way in which the medical profession can meet criticisms will be for its members to be well informed on the subjects discussed in the final report. Therefore, to repeat, if you do not purchase a copy of this final report on your own account, at least see to it that your county society purchases a copy for its library, so that a report and discussions thereon may be made at early meetings.

NEW HOME OF THE LOS ANGELES COUNTY MEDICAL ASSOCIATION

Long-Wanted Home a Realization.—The Los Angeles County Medical Association, with its more than two thousand members, is one of the large county medical societies of the United States. Some twenty years ago a sincere effort was made to launch a medical office building with county society headquarters on a site at the southeastern corner of Sixth and Olive Streets, Los Angeles. That effort was unsuccessful and meant financial loss to all those who invested. Later, on the advice of the then secretary, Dr. Harlan Shoemaker, the association was fortunate in the purchase of property for a new home. Some of these Wilshire district lots were leased to a medical building corporation, composed now largely of physician stockholders. In a resale of some of the properties it has been possible to acquire a new site on which the beginning of a permanent home has been made. In the Miscellaneous department of this issue are printed some excerpts from the *Bulletin* of the Los Angeles County Medical Association, outlining what has been accomplished. (See page 66.)

* * *

The Profession Extends Congratulations.—The members of the California Medical Association residing in other counties congratulate the Los Angeles County Medical Association on this final realization of long deferred hopes, and trust that in the near future a modern library unit, which is contemplated, will go on to construction. In this library unit it is hoped to provide quarters for both the Barlow Medical Library and the Los Angeles branch of the State Medical Library. With the fruition of such plans, the Los Angeles County Medical Association will have created for itself on its own properties a real medical center, and one which will be a great credit to the organized medical profession of California.

Teaching of Ophthalmology.—At the recent annual meeting of the American Academy of Ophthalmology and Otolaryngology in Montreal, a special committee on undergraduate teaching of those specialties, after a study conducted during the past year by means of questionnaires, made the following recommendations:

1. Ophthalmology should be a compulsory subject in both didactic and clinical phases.
2. The undergraduate course in ophthalmology should embrace fifty actual hours as a minimum, which should be given during the junior and senior years, divided into fifteen didactic hours and thirty-five clinical hours, in which the student examines patients in the outpatient department.

It was further recommended that new instructors should be accepted in medical schools only after certification by the American Board of Ophthalmic Examinations or the American Board of Otolaryngology. The academy also organized a committee on extramural instruction to assist medical schools and societies to arrange courses of instruction. To this end the committee has developed a list of specialists who are available in giving local courses and will furnish lists of teachers on any desired subject, according to ability, geographic location and availability.

EDITORIAL COMMENT

This department of California and Western Medicine presents editorial comment by contributing members on items of medical progress, science and practice, and on topics from recent medical books or journals. An invitation is extended to every member of the California and Nevada Medical Associations to submit brief editorial discussions suitable for publication in this department. No presentation should be over five hundred words in length.

Drainage.—The question of drainage is one of the most important with which the surgeon has to deal. In the annals of surgical literature within the last three decades one finds many and varied opinions on the subject. Much experimental work has been done to demonstrate that drainage of the peritoneal cavity as a whole cannot be accomplished. This work has done much to unify the opinions on the subject in recent years. However, there still are differences of opinion among well-trained men as well as differences in practice.

Only a few years ago everyone accepted the principle that when there was doubt, drain. At the present time many reverse this dictum. It is difficult in a short space to correctly and vividly give circumstances illustrating the choice of wisdom. However, whenever there is frank contamination of the peritoneal cavity and indurated, gangrenous tissue, or large attached clots of fibrin remaining, the safest procedure is to drain. If the source of the contamination cannot with certainty be stopped, not to drain would be poor surgical judgment. Let us understand that if the peritoneal cavity is contaminated, and no residual dead tissue or possible further contamination exists, certainly drainage is of no use, and would definitely decrease the ability of the peritoneal cavity to handle the infection. In this situation nothing by mouth, not even water, and adequate morphin will splint the intestines and aid the patient more than any drain. I am still of the opinion that when, after deliberation, doubt exists it is much safer to drain. I have never regretted draining and cannot say as much on the other side of the question.

Something should be said about the adequacy of the drainage. Observations lead one to the conclusion that drainage is often inadequate. If the abdominal wound is sutured tightly about a drain, the drain cannot serve its purpose. In a large infected cavity with infection not well localized, plain gauze packing diverts the flow of lymph and serves admirably if placed in strips in an orderly fashion so that at least some of it can be removed within twenty-four hours without pain to the patient. Because of fistulas from erosion, hard rubber tubes are dangerous. Rolled rubber tissue is preferable when the infection is well localized. If a drainage cavity contains debris and dead tissue the drain had better be left for several days. Otherwise twenty-four to forty-eight hours are sufficient. Drainage following cholecystectomy should be left five days because of the leakage of large quantities of bile from the cystic duct, which occasionally occurs and leads to disaster to

the patient if an exit for the bile is not present. Recent experiments on "bile peritonitis" with anaërobic infection have removed the mystery which formerly existed regarding the dramatic nature of these deaths.

One is also forcibly impressed by the necessity of adequate incisions for drainage of infection in tissues other than body cavities. This is more particularly true of infections about the hand, where many planes exist through which pus can easily spread and do irreparable damage in a very short time. The incision should be large enough and so placed, with a view toward the future function of the hand, to relieve all pressure and establish lines of least resistance to the surface for the pus to follow. If this is done it is not necessary to insert scar-stimulating foreign material for drainage.

Adequate incisions relieve tension on the tissues, allow better blood supply and greater resistance to infection with less loss of tissue by necrosis. Such incisions will heal more quickly than smaller ones that do not prevent unnecessary tissue necrosis. There are but few infections with which the tissues cannot cope if proper early drainage is established.

To philosophize, the well-being of the human race depends in many respects upon drainage. Obstruction to the gastro-intestinal tract, the bile tract, the bronchi, the nasal accessory sinuses, etc., leads to various and well-known difficulties and often death. The female becomes unhappy, has a "good cry," and obtains relief by emotional drainage. Many women do not feel well if their menses are scanty. A man mashes his finger, curses, gets drainage and feels better, and so on, and so on, approaching infinity.

490 Post Street.

LEROY BROOKS,
San Francisco.

Prone Knee Flexion: In Differential Diagnosis of Low Back Pain.—Many manipulative tests are in use throughout the world in the differential diagnosis of low-back pain, but of these Lasegue's is probably the best known. This consists in flexion of one hip with the knee in full extension, the patient lying on his back, and therefore is briefly described as "supine straight leg raising." The purpose of this test is to increase the tension of the tissues on the posterior surface of the thigh and cause pain in the sciatic nerve when this structure is inflamed. By tension on the hamstrings, the ilium is rotated posteriorly and pain is produced in an inflamed sacro-iliac joint. Carried further, through the medium of a

normal sacro-iliac joint, the sacrum also is rotated posteriorly, the lumbar lordosis decreases, and pain is produced in the opposite sacro-iliac joint when inflamed.

Several tests have been devised to produce an effect upon the sacro-iliac joints comparable to supine straight leg raising, but tending to produce the opposite rotation. Prone straight leg raising accomplishes this, as does Gaenslen's test. In the latter the patient lies in lateral decubitus, with the inferior hip and knee flexed and the knee grasped in his hands to maintain flexion, while the examiner extends the superior hip. Still another way of producing forward rotation of the ilium is to allow one lower extremity to hang off the examining table while the patient lies supine. All these tests depend upon two structures for the transmission of force to the ilium: (1) the anterior thigh muscles that attach near the anterior superior iliac spine (rectus femoris, sartorius, tensor fasciae femoris), and (2) the anterior capsule of the hip-joint, or "Y" ligament.

Because none of these maneuvers is easy, especially where the patient is in severe pain, for the past four years I have been studying the use of prone knee flexion as a diagnostic test. With the patient lying face down on the examining table (a position usually found comfortable, even when back pain is severe), the examiner places one end of a ruler on the sacrococcygeal junction, and with his other hand flexes each of the patient's knees, in turn. If the patient is coöperative and relaxes, a point will be found where involuntary resistance is encountered, and the leg will tend to bounce slightly upon the tense anterior thigh muscles. At this point the distance between the heel and the sacrococcygeal junction is to be noted. Forcing the flexion beyond the point of resistance by tensing the anterior thigh muscles tends to rotate the ilium anteriorly and cause pain in the sacro-iliac joint if inflamed. Carried further, through the medium of a normal sacro-iliac joint, the sacrum tends to be rotated anteriorly, the lumbar lordosis increases, and pain is produced in the opposite sacro-iliac joint when inflamed. Prone knee flexion, unlike supine straight leg raising, causes no confusion in the differential diagnosis between inflammation of the sciatic nerve and inflammation of the sacro-iliac joint. Nor does it depend upon the ligaments of the hip-joint for transmission of rotatory force to the ilium.

Dr. Leonard Ely has noted that under certain circumstances prone knee flexion causes an involuntary elevation of the pelvis from the table, and although he has never published this observation, elevation of the buttock in prone knee flexion has come to be known as "Ely's sign" in and about San Francisco. This he interprets (personal communication) as indicating a lumbar spine so sensitive or rigid that the patient must elevate the pelvis (thereby flexing the hip and relaxing the tension on the anterior thigh musculature) as the knee is passively flexed.

The excursion of the leg in prone knee flexion is asymetrically decreased in inflammatory proc-

esses of the sacro-iliac joint, the decrease usually being found on the same side as the decreased excursion in supine straight leg raising. In torsion injuries of the pelvis, prone knee flexion is frequently decreased on one side and supine straight leg raising is decreased on the other. This test and the data to be gleaned from its use will be discussed in greater detail in a paper on sciatic scoliosis, now in preparation.

490 Post Street.

HORACE C. PITKIN,
San Francisco.

Columbia University Patents Vitamin D Product and Supervises Its Use for Public Good.—A plan for the eradication of infantile rickets, a very common disease in its milder forms, has been developed at Columbia University and is being placed in operation in several cities, according to a statement by Dr. Theodore F. Zucker of the College of Physicians and Surgeons, Columbia University, in an address which he made before a meeting of the New York Chapter of the American Institute of Chemists held in the auditorium of the McGraw-Hill Building.

This plan is based on a process worked out by Doctor Zucker for concentrating the vitamin D content of cod-liver oil in a solution which can be added to bread and milk. If the use of these common foods so treated becomes general, Doctor Zucker said, rickets will vanish as a public health menace because vitamin D is known to be a preventive of this disease.

In order to administer this discovery for the general good, it was patented and the patent assigned to University Patents, Inc., a board set up by Columbia University, Doctor Zucker explained. A license to manufacture and distribute the concentrate was granted the National Oil Products Company of Harrison, New Jersey, which in turn sublicenses bakeries and dairies to use the concentrate in their products. The university exercises strict supervision over the manufacture, application and promotion of the concentrate, the prices charged for the products containing it, and otherwise safeguards the public interest. It devotes the royalties received to research work.

"Infantile scurvy was once a widely prevalent disease," said Doctor Zucker in discussing the subject of "Vitamin Research and Public Health," "but it is now nearly unknown except in very ignorant or highly destitute surroundings. It was overcome through the recognition that the cause of the disease is lack of vitamin C and that this vitamin can be administered through the use of orange or tomato juice. In a similar way, rickets can be eliminated by the administration of vitamin D."

Doctor Zucker described the process by which he extracted the vitamin D content from cod-liver oil and concentrated it in a solution that is one thousand times more potent in this rickets-preventing factor than the original oil, and that can be added to various foods without affecting their flavor. The efficiency of the concentrate in curing rachitic children has been shown by tests that have been made in the children's clinic of the Bellevue Hospital, the Children's Hospital at Detroit, and several other health centers, he said.

"There are other ways of supplying vitamin D through the diet," he pointed out, "such as by irradiating milk by means of ultraviolet light. But the use of the natural vitamin D concentrate of cod-liver oil provides a means of making available and putting within reach of everyone articles of everyday food which will serve as a rickets-preventive for infants and a regulator of mineral metabolism for the growing young. We have high hopes that through this modest contribution of ours we can aid in the task of eradicating rickets."

C. M. A. DEPARTMENT OF PUBLIC RELATIONS

An open forum for progress notes on the department's activities, and for brief discussions on medical economics. Correspondence and suggestions invited. Address Walter M. Dickie, Room 2039, Four Fifty Sutter Street, San Francisco. This column is conducted by the Director of the Department.

THE ADMINISTRATION OF MEDICAL CARE

Some Principles Which Must Predominate In Any Plan

Some of the principles which have long predominated in the practice of medicine are stated below. In the interest of the public good and the future of the medical profession, there should be no lowering of standards because of financial stress or temporary expediency. On the contrary, it may be possible that these principles can be strengthened and others of importance may be added.

1. The welfare of the public is of primary importance. Exploitation of the public for economic advantage and financial gain is inimical to good medical service.
2. The unity of medical organization must be preserved for the protection of the public welfare and the advancement of medical science.
3. Free choice of physician must be guaranteed.
4. Opposition to unfair competition among physicians must be maintained. Any distribution of medical service which depends on compulsion for its acceptance and use establishes an unfair competition among physicians and introduces a monopolistic control of medical care.
5. Sacrifice of quality of medical service through the action of commercial competition must not be tolerated.
6. No form of solicitation or compulsion must be exercised on patients to compel them to enter into any system of medical care. Any deviation from this principle subjects medical qualifications and care unduly to financial considerations.
7. Full responsibility for the determination of professional qualifications and ethics and adequacy of medical service must be vested in the medical profession.
8. Compensation for medical care should be adequate to insure competent service.
9. Preventive or preclinical medicine must not be neglected.
10. Any change in the method of administering medical care should always be preceded by careful and thorough study by the medical profession. Change is justified only on the premise that the new methods to be adopted are superior to the old which they supplant.—R. G. Leland, M. D., *American Medical Association Bulletin*, October, 1932.

AN EQUITABLE DISTRIBUTION OF GROUP INCOME

Based upon an experience of nearly ten years, I am suggesting the following method of equitably calculating the percentage of net income from a partnership or group practice unit, which should go to each member so that each member may receive as exactly as possible the amount he has earned.

The plan is to calculate the percentage of the various activities of the firm performed by each member: the work done in office calls, charged and free; the house and hospital visits, charged and free; the amount charged and the amount collected, and an arbitrary factor of good will.

Into this item of good will can be credited by mutual agreement all the obvious but unmathematical differences in value of each member to the firm; age, experience, length of residence, reputation, skill, spe-

cialty. For instance, the pathologist compared with the surgeon; the new member and the well-established member, etc. This proportionate value must be more or less arbitrarily fixed from time to time by mutual, frank discussion in the full spirit of coöperation and fair play. It is obvious that without this spirit no partnership or group can succeed.

In actual practice the figures work out as follows, the first figures being the percentage of the total work and calls for each member for the preceding month or six months. All of these figures except "good will" were taken from actual experience.

	Dr. A.	Dr. B.	Dr. C.	
Work Percentages				
Office—no charge	12.61	44.50	42.89	100%
Calls—no charge	18.97	48.15	32.88	100%
Total office	22.96	43.38	33.66	100%
Total calls	13.34	47.09	39.57	100%
400 per cent	67.88	183.12	149.00	
100 per cent	16.97	45.78	37.25	
Cash Percentages				
Business, per cent	20.47	45.79	33.74	100%
Cash total	24.78	44.34	30.88	100%
200 per cent	45.25	90.13	64.62	
100 per cent	22.62	45.07	32.31	
Final Percentage				
Work, per cent	16.97	45.78	37.25	100%
Return, per cent	22.62	45.07	32.31	100%
Good Will, per cent	35.00	40.00	25.00	100%
300 per cent	74.59	130.85	94.56	
100 per cent	24.86	43.62	31.52	

Final percentage to be used for distribution of net income to be applied to either a preceding period or to a succeeding one.

The items in the partnership agreement covering these calculations read as follows:

The secretary shall keep a careful record of all work done by each member. Such record shall show daily:

1. The amount of work done.
 - a. Number of visits charged.
 - b. Number of visits no charge.
 - c. Number of office calls charged.
 - d. Number of office calls no charge.
2. Monetary value to firm.
 - a. Total earned.
 - b. Total collected.
3. Such other records as may from time to time be agreed upon, as number of anesthetics, amount of laboratory work, number of operations, an arbitrary per cent allowance for surgical or other specialty fees, etc.

At the first of January and the first of July, or at more frequent intervals, a total of these records for each partner for the past six months shall be made and a percentage of the total work done by the partner for the past six months shall be made and a percentage of the total work done by each member shall be calculated in separate figures as measured in "work" and as measured in "monetary value" (marked "cash" on sheet), and as measured in "good will."

The total of these percentages gives an accurate picture of the relative worth to the firm of each member and form an equitable basis for the division of net income. These percentages may be made to apply to the past month or half year, or to the coming month

or other period, as desired. Other factors of earning capacity may be from time to time mutually agreed upon, *i. e.*, the number of operations, obstetric cases, laboratory work, anesthetics, etc.

New members can be easily added to the group or old ones permitted to withdraw by fixing the present value of assets by agreement or arbitration, and admission or release from this percentage calculation. The factor of "good will" acts as a buffer to adjust actual or fancied unmathematical values in personalities, mental equipment, skill, etc.

Twice each year for nearly ten years the sheets upon which these calculations were made were studied by each of the three members of the firm and at no time was there any suggestion of inequity in the final figures.

The calculations are simple percentages, and the several secretaries employed during this time had no difficulty at any time nor did they complain of the few minutes per day devoted to them.

I should have enjoyed trying it out on a group of ten or a dozen.

C. VAN ZWALenburg, M. D.,
Riverside.

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VARIATION IN COST OF MEDICAL SERVICE

In formulating a medical service plan for group practice on a periodic payment basis, we have to consider the question of cost to the individual, and whether the same is within his ability to pay. Naturally the cost of medical service will vary according to the conditions existing in the individual community. In taking up the study of this subject, one cannot help but be impressed by the utter lack of statistical figures on the cost of medical service to the individual.

Dr. Michael M. Davis, in his book on "Paying Your Sickness Bills," sets forth various studies of small groups of families, one of which is a 12,000 family group which was surveyed by the United States Bureau of Labor Statistics. This number was divided in seven groups, according to their income per annum, ranging from those under \$900, up to and including \$2,500 and over. It is surprising to note that the percentage spent for medical care in all these groups was approximately four per cent of annual income, and the amount spent varied from \$34 in the group whose income was under \$900, to \$95.56 in the group with incomes of \$2,500 or over. The average amount spent was \$60.39. There was a gradual increase according to the income of the family.

It is difficult to account for the large variation in costs unless we assume that those in the lower brackets of income received inadequate medical care.

We also have a study of another group of some 17,000 persons in which the average yearly expenditure per family amounted to \$140. In this survey, one of our national life insurance companies found that in a group of 3,281 families among industrial policyholders, consisting of 17,129 persons, only 198 families reported no expenditure for sickness. However, a grand total of \$230,907 was spent by all families, over a period of six months, making an average expenditure per family of \$70, or \$140 a year. Again the disproportionment of disbursements for sickness was marked: 64 per cent of the total amount having been expended by 20 per cent of the total number of families.

In a preliminary report made by the Committee on the Costs of Medical Care it was shown that out of a group of 4,560 families whose annual incomes varied from \$2,000 to \$5,000 that the average cost of sickness per family ranged from \$71.48 in the lowest income group to \$311.06 for the group with incomes of \$5,000 or over. Families with incomes of less than \$1,200 averaged \$66 expenditure. Expenditures in all groups represented about five per cent of income.

From these figures and others that are available, it would seem that the average family of moderate means spends on an average of from \$60 to \$140 a year for medical service, there being a very rapid rise

in expenditure with increased income. Expressed in terms of percentage the amount spent ranges between four and five per cent of annual income.

We have no way of determining whether or not the medical care in the lower brackets of income was in any way adequate, nor to what extent the services of a physician were employed. It would probably be more conservative to take the cost of medical care as indicated in the higher brackets, which would place the expenditure of the average family near the maximum average of \$140, rather than the minimum average of \$60 per year.

We also find that the cost of medical care varies according to the particular locality in which the study has been made. For instance, the cost of medical care shows a wide degree of variation between the eastern and western states, averaging \$52 annual expenditure per family along the Atlantic seaboard, and \$73 for the average family living in the West.

In a further analysis of the cost of illness, we find that a group study of 17,000 illnesses, made by the United States Public Health Service in Hagerstown, Maryland, recorded the following kinds of care:

	Per Cent
Private physicians	46.00
Medical care in hospital	1.34
Chiropractors and osteopaths	0.41
Self-medication	2.25
No form of care reported	50.00

In returning to the original survey of 12,000 families made by the United States Bureau of Labor Statistics, we find that the average annual expenditure of \$60.39 per family was spent in the following manner:

For physicians	\$32.17
For medicine	10.39
For dentist	8.23
For hospital care	4.56
For nursing care	3.02
For eyeglasses	1.75
For miscellaneous services, etc.	0.27

The foregoing surveys and others which have been made indicate the wide variance in the cost of medical care among families of moderate income, and just what the basis of a fee schedule should be can best be determined when some county medical society undertakes to furnish adequate medical service on a stipulated periodic payment plan.

Water-Front Safety Activities.—During the past five years there has been a constant effort to reduce the accident rate among the stevedoring companies and marine interests on the Pacific Coast. A steady improvement is noted. The Pacific Steamship Company at San Francisco has recently completed 100,000 long-shoreman hours without a lost-time injury. Chief Stevedore Julius Tillman, supported by his immediate chief, Port Captain C. Hansen, and his operating manager, W. P. Bannister, has achieved this result. One gang boss has a record of over three years without a compensable injury. Too much credit cannot possibly be given to an organization of this sort when it accomplishes such work, and each man participating deserves to be congratulated.

Iodized Salt and Goiter Surgery.—McClure points out that there has been a tremendous reduction in the incidence of nontoxic diffuse goiter since the introduction of iodine salt in Michigan. There has also been a marked dropping off in the number of goiter operations in the Detroit and Ann Arbor areas since the introduction of this salt. The number of all operations has increased, so that relatively there is a still more marked drop. The author does not conclude from these facts that iodine deficiency is the only cause of goiter but he does believe that, if the thyroid can be kept in its normal state by a sufficient intake of iodine, toxic diffuse and nodular goiters are less apt to develop.—*Wisconsin Medical Journal*, August, 1932.

CANCER COMMISSION OF THE C. M. A.

The Cancer Commission was brought into being by the House of Delegates of the California Medical Association to aid in the furtherance of all efforts to combat cancer. The roster of officers and the central office of the Commission to which communications may be sent is printed in this issue of California and Western Medicine (see front cover directory). This column is conducted by the Secretaries of the Commission.

REPORT OF THE COMMITTEE ON RADIOLOGY*

II

RECTAL

It was generally agreed that in "operable" cases of rectal carcinoma surgery should be elected.

It was the consensus of opinion that a combination of gold seeds, heavily filtered surface applications of radium, and high voltage x-ray had a field of usefulness in the treatment of rectal malignancies, the size and position of the growth causing a wide variation in the technique of treatment. It was thought that in practically no case could any one of these single methods be used and sufficient dosage obtained to destroy all the malignant cells. It was generally agreed that high voltage x-ray should precede the local application of radium. Palliation consisting of lessening of bleeding, partial destruction and retardation of the growth, relief of pain, and prolongation of life was reported. Six men reported as having seen five-year cures from radiation alone in rectal carcinoma. It was agreed that the value obtained from preoperative radiation, as evidenced by palpable shrinkage of the growth was sufficient to offset the delay in operation caused by the high voltage x-ray treatments. The general opinion was that operation should not be done until at least four weeks after the last x-ray treatment.

The majority advised preliminary colostomy before the institution of radiation therapy in rectal cases. If a period of four weeks (more or less) is planned between colostomy and operation (as many advise), radiation given immediately following colostomy offers practically no delay of the final operation.

It was stated that cases clinically inoperable or on the border line of operability may be rendered operable by preliminary radiation.

BONE TUMORS

Almost everyone answering the questionnaire had seen both palliative and curative results from radiation treatment of giant cell tumor of bone, a number of five-year cures being reported. The majority had seen palliative results in osteogenic sarcoma (50 to 75 per cent), osteochondroma, Ewing's tumor, and metastatic bone growths. One case of a five-year arrest by radiation was reported as being round cell sarcoma, and another as metastatic lymphosarcoma. The majority advised preoperative radiation in bone tumors suspected of being malignant. This can often be carried out while diagnostic studies are being made, including consultations. Response to radiation therapy may in itself be of diagnostic significance. The radiation treatment of bone tumors consists of thorough saturation with high voltage x-ray.

LYMPHOGRANULOMATA (HODGKIN'S, LEUKEMIAS)

Practically everyone used x-ray therapy entirely instead of radium in treating these conditions. The usual method was small doses over long periods of time, according to the progress of the disease and the condition of the patient. Most used low voltage technique, reserving high voltage for mediastinal and deep gland involvements in more resistant cases. The majority reported that all cases had shown palliative improvement from radiation treatment except a few cases of acute leukemia. Even the majority of cases of acute

leukemia had shown temporary palliation. It was generally believed that radiation prolongs life in both Hodgkin's and leukemia. Many reported that the average life of their treated cases had exceeded the average life of untreated cases from one to six years.

GENITO-URINARY—MALE AND FEMALE

Testicular Tumors.—In testicular malignancies the majority advised preoperative radiation before the surgical removal of the primary lesion. The time interval recommended between the last radiation treatment and operation averaged from four to six weeks, insuring time for complete radiation effects to take place. All agreed that radiation was superior to any operative interference on the abdominal lymph gland metastases in these cases. Five men had seen definite five-year cures by radiation of the abdominal lymph glands.

(Note.—The Committee on Genito-Urinary Tumors advises distinction between seminoma and teratoma, the former sensitive to radiation, the latter not; therefore it recommends radiation of the abdominal gland region after orchidectomy for seminoma and, on the other hand, radical dissection of the abdominal nodes for malignant teratoma, pointing to records of a number of cures by the latter method. Also, on account of the frequent very rapid growth and spread of teratoma, biopsy diagnosis and immediate removal of the testis is recommended without the four to six weeks' delay for preoperative radiation.)

Kidney Tumors.—The majority had not seen five-year cures by radiation alone in kidney tumors. Four men reported five-year cures. The majority advised preoperative and postoperative radiation in the treatment of kidney tumors. Practically all had seen definite palliative effects from radiation of inoperable kidney tumors, these effects being lessening of hemorrhage, lessening of pain and diminution in the size of the growth.

Bladder Tumors.—Preoperative radiation of bladder tumors by means of high voltage x-ray was generally advised. This, followed by electrocoagulation of the bladder tumor with implantation of gold radon seeds, was thought to be the best technique. Postoperative high voltage radiation was also advised. Two cases of five-year cures of bladder tumors from radiation alone were reported. About ten cases of five-year cures were reported following a combination of surgery and radiation. (For further details, see report of Genito-Urinary Tumors Committee, CALIFORNIA AND WESTERN MEDICINE, 37:333.

Prostate Malignancies.—High voltage x-ray was considered to be of definite palliative value in inoperable carcinoma of the prostate in about 75 per cent of the cases. In recurrent postoperative carcinoma of the prostate, radiation was generally agreed to be of value although the majority did not state in what percentage. About one-fourth of the men considered it to be of value in about 50 per cent of the cases. The majority did not favor the interstitial application of radium to the prostate through the perineum by means of steel needles or gold seeds. Some thought too much irritation was produced and too little palliation to justify the procedure. Five men had seen five-year cures in carcinoma of the prostate from radiation alone. (See report of Genito-Urinary Tumors Committee.)

MALIGNANCIES OF FEMALE ORGANS

Vulval or Vaginal Malignancies.—In vulval and external vaginal lesions the majority advised surgical removal of the local growth, followed by radiation. It

* Part I of this Report was printed in the December California and Western Medicine, page 409.

was advised that the smaller lesions be treated either by gold seed radon implantation or heavily filtered surface radium application, followed later by x-ray therapy over field and glandular areas. The majority had seen cases, recurrent after operation, cleared up temporarily and for five-year periods by radiation methods.

(Note.—The Committee on Gynecologic Tumors calls attention to wide variance of opinion—with regard to surgery alone, radiation alone, combination of the two—and suggests that intelligent decision may well be based on the degree of malignancy shown by biopsy. Highly malignant growths do poorly after surgery and are susceptible to radiation, at least for palliation; less malignant tumors are not so sensitive to radiation and have better chance for cure with surgery for both primary and metastatic lesions. (See Gynecologic Report, CALIFORNIA AND WESTERN MEDICINE, 37:131.)

Ovarian Malignancies.—In operable ovarian malignancies everyone advised surgical removal of the primary tumor (with hysterectomy) followed by high voltage x-ray therapy as the proper procedure. It was not considered wise to advise attempts at removal of metastatic masses. Some thought this feasible if the masses were causing obstructive symptoms. The majority had seen definite palliative results from the high voltage x-ray treatment of metastatic ovarian carcinoma. Estimates varied from 10 to 50 per cent. Five men had seen five-year cures. (For further details, see Gynecologic Report.)

Uterine Malignancies.—There was practically a unanimous agreement that all cases of carcinoma of the cervix should be treated by radiation, even the small involvements limited entirely to the cervix. A few members of the Gynecologic Committee still adhere to hysterectomy for very small growths limited to the cervix. One member specifies this limitation to growths of low-grade malignancy as determined by biopsy. This group, however, comprises an extremely small percentage, and for the overwhelming majority of cervical carcinomas the opinion of both committees is unqualified that radiation (radium plus deep x-ray) should be used to the exclusion of surgery. (See Gynecologic Report, CALIFORNIA AND WESTERN MEDICINE, 37:131.)

Also, it was generally agreed that high voltage x-ray therapy should be used in conjunction with radium therapy, being given preferably before the radium series. A more or less standardized method of radium application was advised, such as the Stockholm type of technique or a slight modification of this. A few followed the Regaud type of application. Filtration the equivalent of from one to two millimeters of platinum was used. Total dosage varied from 2,000 to 3,000 milligram hours intra-uterine and from 3,000 to 4,000 milligram hours vaginal with Stockholm technique, a total of as high as 7,000 to 10,000 milligram hours being used in the Regaud or more prolonged type of application. The high voltage x-ray therapy should be given according to saturation dosage methods, with measurement of patient and careful computation of dosage in international roentgen units and depth dosage. Cases should be individualized as to dosage given, but the majority advised making an attempt to give full dosage even in advanced uterine cases with extensive pelvic gland involvement.

The majority agreed that in carcinoma of the fundus, where the growth was apparently entirely limited by the walls of the uterus, hysterectomy is the method of choice. Some had used radium preoperatively in carcinoma of the fundus, followed by hysterectomy about four weeks later. Eight advised the use of high voltage x-ray in conjunction with radium in cases of carcinoma of the fundus treated by radiation alone. The dosage of radium in these cases varied from 3,000 to 6,000 milligram hours total, with the equivalent of one or two millimeters of platinum filter.

THYROID MALIGNANCIES

In the treatment of thyroid malignancies, high voltage x-ray or radium (distance packs) or a combina-

tion of these two is recommended. No one had used interstitial radiation in thyroid malignancy. Some were beginning to use the Coutard technique in these cases. Six men had seen five-year cures in thyroid malignancies, a total of sixteen cases being reported. Palliation, consisting of relief from pain, diminution in the size of the growth and lessening of pressure symptoms, was reported as occurring in from 25 to 100 per cent of cases following radiation therapy.

The above comments refer to methods of radiation treatment for preoperative and postoperative use and for inoperable cases. For discussion of surgery in thyroid malignancy, see report of Thyroid Tumors Committee to be published later.

BREAST CANCER

The majority did not believe it acceptable, under present knowledge, to depend entirely upon radium and x-ray therapy in operable cases, as radical surgery is apparently the method of choice. Eight, however, believed it justifiable especially in cases which were poor surgical risks and where operation is contra-indicated. Attention is called to the development of a combination of interstitial and external radiation for carcinoma of the breast. It is possible that this method will yield better results than previous forms of radiation, and its value compared with that of surgery will have to be evaluated after further experience.

It was almost a unanimous opinion that preoperative radiation increased the number of five-year cures in breast carcinoma. The majority used high voltage x-ray in the preoperative breast treatment. Some used radium interstitially. In the preoperative treatment an attempt is made to give the dosage in a few days (one week to ten days), the surgery following on an average of about four weeks after the last treatment. The optimum time relation of preoperative radiation and operation is apparently not yet satisfactorily settled. (See Breast Report, CALIFORNIA AND WESTERN MEDICINE, 37:267.)

Postoperative radiation was advised by practically everyone as a routine. The great majority believed this valuable from their own experience. Usually a thorough course of treatments was given shortly following operation and repeated in from two to three months. A few preferred waiting for further treatment until signs of recurrence appeared. The committee felt that localized recurrent nodules in the field of operation could be treated either by surgical excision or by radiation, or by a combination of both methods. If the recurrences are multiple, then radiation alone is the preferable method of treatment. The majority had seen cases with postoperative recurrence which had cleared up following radiation and remained so for a five-year period.

In breast cases, as well as in other malignancies where the radiologist takes part in the treatment, the committee felt that the radiologist should share with the surgeon the responsibility of checking the follow-up of the patient for the remainder of his life.

CALIFORNIA CANCER COMMISSION COMMITTEE ON RADIOLOGY:

William E. Costolow,	Carl H. Parker
Chairman	Charles E. Peters
Irving S. Ingber,	John M. Rehfish
Secretary	Charles M. Richards
Carl B. Bowen	F. H. Rodenbaugh
Lloyd Bryan	H. E. Ruggles
Orrin S. Cook	William H. Sargent
Kenneth S. Davis	A. C. Siefert
Monica Donovan	Henry Snure
A. E. Elliott	Albert Soiland
L. H. Garland	Robert S. Stone
S. A. Jelte	F. C. Swearingen
Robert F. Kile	Laurence Taussig
Lyell C. Kinney	R. G. Taylor
John D. Lawson	H. J. Templeton
Joseph Levitin	Paul F. Thuresson
Orville N. Meland	H. J. Ullmann
Seeley G. Mudd	R. G. Van Nuys
R. R. Newell	Calvin B. Witter
John R. O'Neill	Harold Zimmerman

STATE MEDICAL ASSOCIATIONS

This department contains official notices, reports of county society proceedings and other information having to do with the state associations and their component county societies. The copy for the department is edited by the state association secretaries, to whom communications for this department should be sent. Rosters of state association officers and committees and of component county societies and affiliated organizations, are printed in the directories noted under Miscellany, on the front cover index.

CALIFORNIA MEDICAL ASSOCIATION

JOSEPH M. KING.....President
GEORGE G. REINLE.....President-Elect
EMMA W. POPE.....Secretary-Treasurer

OFFICIAL NOTICES

Next Council Meeting.—The date of the next meeting of the Council has been set for January 21. The meeting will be held in the offices of the Association, 2004 Four Fifty Sutter Street, San Francisco.

* * *

California Medical Association Clinical and Research Prize Papers.—The customary clinical and research prize contest has been authorized, and the usual prize award will be made to the successful contestants at the annual session of the California Medical Association, to be held at Del Monte, April 24-27, 1933.

Any member interested in the rules governing this contest may secure copy of same by application to the state office, 450 Sutter Street, San Francisco.

COMPONENT COUNTY MEDICAL SOCIETIES

FRESNO COUNTY

The meeting of the Fresno County Medical Society was held at the University-Sequoia Club at 8 p. m. on November 15. This meeting had been postponed for two weeks in order to make it possible for Dr. John H. Graves of San Francisco to be present and explain the insurance proposals which are being considered by the medical men of the state.

The business session preceded the program of the evening.

Applications for membership were presented to the society by Dr. John T. Perry of Corcoran and Dr. Roy Earl Allen of Reedley.

The names of the following applicants for membership were then read: Doctors William H. Gilliatt of Coalinga, Marvin H. Moore of Fresno, Walter N. Levin of Fresno, and Kenneth W. Butler of Madera.

Dr. T. M. Madden moved that the secretary cast a unanimous ballot accepting these men as members of the Fresno County Medical Society. Motion was seconded by Dr. J. R. Walker, and carried.

Doctor Morgan reported unfavorably on the question of formation of the credit bureau.

A letter from Dr. H. M. Ginsburg, director of the General Hospital, to the president was presented:

Will you kindly read the following letter at your next medical society meeting?

Dr. Harold Brunn and his staff will be in Fresno December 2, 1932, to conduct a round table discussion on chest conditions. Doctor Brunn would appreciate seeing the work of others and will gladly attempt to answer and discuss all questions.

We would greatly appreciate having you with us, and if you have any problems or questions, bring them with you. The conference will be held in the nurses' home of the Fresno General Hospital at 8 p. m., December 2, 1932.

A copy of the medical service study of the Committee on Public Relations, as adopted by the Council of the California Medical Association at its meeting

held in Los Angeles, September 24, was not read, due to the fact that Dr. John H. Graves was to take up the same articles and discuss them. Also this article appeared in the November issue of CALIFORNIA AND WESTERN MEDICINE.

A letter from the Hargrove Air Service was presented in reference to the placing of an ambulance airplane in the service for the convenience of California surgeons and hospitals. It was decided by the Board of Governors that theoretically this would be very fine but of little practical value, and would not advise the expenditure of a large amount of money for that purpose. However, if such an ambulance is put into service it will be used when deemed advisable.

The San Francisco Heart Committee announces the third annual postgraduate symposium on heart disease at San Francisco on November 16 and 17, all being invited.

Communication from T. E. Dunshee, principal of the Fresno evening high school, recommending the splendid opportunities for study, recreation, vocational improvement, and mental growth now open to men and women of Fresno at the evening classes of the public evening high school.

The report of the Nominating Committee of the Fresno County Medical Society was then presented:

E. J. Schmidt, president; W. F. Stein, first vice-president; W. A. Hunt, second vice-president; Neil Dau, secretary; H. A. Randol, assistant secretary.

Delegates—J. R. Walker, T. M. Madden, R. W. Dahlgren, and George Sciaroni.

Alternates—George Walker, Neil Jorgensen, and Hy. Ginsburg.

Nominating Committee—Clinton D. Collins (chairman), T. M. Madden, and J. M. Frawley.

Following the business session Dr. John H. Graves of San Francisco discussed some of the insurance proposals of the medical profession, particularly the insurance problem as worked out by the Committee on Public Relations and adopted by the Council of the California Medical Association. The care of the low-salaried man is an immense problem which confronts the medical men of the State of California and must be worked out in detail by each society before it can be put into practice. Many questions were asked and a general discussion followed. The local Committee on Economics is diligently working on this problem, and asked that all members interested meet with the committee, which meeting was held on November 25 at the University-Sequoia Club.

* * *

A monthly meeting of the Fresno County Medical Society was held on December 6 at 8 p. m. at the University-Sequoia Club, with forty-five members present.

Dr. Roy Earl Allen of Reedley and Dr. John T. Perry of Corcoran were unanimously elected to membership.

Veterans' Hospital Legislation.—A letter from O. D. Hamlin, chairman of the Council, which was sent to the secretary of all county societies, was read, together with a copy of the recommendations from the Alameda County Medical Association, Oakland, in regard to Veterans' Administration Hospital.

It was moved by Dr. W. E. R. Schottstaedt, seconded by Dr. J. R. Walker, that the Fresno County Medical Society endorse the letter. Motion carried.

Dr. Frank Tillman made a motion, which was seconded by Dr. C. O. Mitchell, that the original committee, consisting of Doctors Neil Dau, A. E. Anderson, and D. H. Trowbridge, take care of this matter in the proper manner.

Ownership of X-Ray Plates.—A letter from the secretary of the state society in regard to ownership of x-ray films was read. Copies may be had by applying to the secretary.

Immunization Procedures.—A Mr. McClatchy from the State Board of Health contacted the president, Doctor Scarboro, and the secretary in regard to immunization procedures recommended by the State Board of Health in the following communication:

Immunization Procedures

The importance of immunization procedures in the prevention of certain diseases has been established definitely and the application of such procedures has become extended greatly during recent years. In many of the rural communities of the state, relatively few children have been immunized against diphtheria, and facilities are often lacking in the provision of medical services to apply immunization to children of rural communities. Upon the request of health officers of rural counties, when emergencies exist the State Department of Public Health stands ready to provide assistance in the immunization of rural children provided that the work has the complete coöperation of the physician in the community. It is not the policy of the State Department of Public Health, however, to carry on this work itself, but its policy is rather to stimulate and encourage the extension of immunization work in legal communities by local individuals.

To this end, it is suggested that health officers throughout the state take active steps to encourage the immunization of children by local physicians. It is suggested that letters be sent by practitioners of medicine to the mothers of all newly born children who may be their patients, advising that, at the proper time, infants be brought to their offices for immunization against diphtheria and smallpox, and follow-up letters at the proper time be sent. It is suggested also that such letters be sent to the parents of rural children under eight years of age who may be patients of the practitioner, advising the application of similar immunization procedure. It is suggested further that records of immunization be kept by all practitioners of medicine and that they be requested to send a copy of such records to the local health officer at least every month. A standard minimum charge for immunization should be established. It is suggested further that health officers, wherever they have access to the school, advise parents through public school teachers to have children taken to their family physician for immunization. Detailed records should be kept in order that the merits of this plan may be judged properly.

It is well known that physicians at the present time are immunizing large numbers of children against diphtheria. There is no clearing house for determining the number of such who may have been immunized. Under this plan, local health officers could work in coöperation, which would enable them to know the exact status of the protection that has been provided against diphtheria in the community. If physicians do not care to immunize indigents, such cases should be referred to health officers by the physician. It is believed that through the application of such a plan as this large numbers of children who at the present time are not immunized against diphtheria and smallpox can be made immune.

The reading of this letter was followed by considerable discussion, especially by our city health officer, Dr. C. Mathewson.

Dr. G. A. Hare moved that the president appoint a committee of nine with the power to act and meet with the city commissioners in regard to immunization work. Seconded by Dr. C. O. Mitchell. Carried.

The president appointed K. J. Staniford (chairman), E. L. Bennett, E. J. Couey, Neil Jorgensen, C. D. Collins, E. R. Scarboro, C. O. Mitchell, George Sciaroni, and W. F. Wiese.

Coöperation with Freeholders' Board.—Dr. T. F. Madden, who is a member of the Freeholders' Board and on a special committee to work out measures for the control of public welfare and hospital work, gave a short explanation of what they were trying to do and asked for a committee from the society to work with him.

Dr. J. R. Walker moved that the president appoint a committee to meet with the County Charter Com-

mittee and assist in incorporating measures to help control public welfare and hospital work. Seconded by Dr. C. O. Mitchell. Motion carried. The chair appointed J. R. Walker (chairman), Hy. Ginsburg, and C. Mathewson.

Election of Officers.—Election of officers for the ensuing year followed.

The following is the report of the Nominating Committee of the Fresno County Medical Society:

E. J. Schmidt, president; W. F. Stein, first vice-president; W. A. Hunt, second vice-president; Neil J. Dau, secretary; H. A. Randel, assistant secretary; J. R. Walker, board of governors.

Delegates—T. F. Madden, R. W. Dahlgren, and George Sciaroni.

Alternates—George Walker, Neil Jorgensen, and Hy. Ginsburg.

Nominating Committee—T. F. Madden, J. M. Frawley, and Clinton D. Collins.

Dr. C. O. Mitchell moved that the secretary cast a unanimous ballot in favor of the officers proposed by the Nominating Committee. Seconded by Dr. W. E. R. Schottstaedt. Motion carried.

Discussion of Hospital and Group Practice.—In the absence of Dr. A. E. Anderson, who was ill, Dr. C. O. Mitchell, the secretary of the Committee on Economics, submitted a report of the committee by reading the minutes of the meeting held,* as follows:

A meeting of the Committee on Medical Economics, with Dr. A. E. Anderson in the chair, was held on November 25.

It was moved and seconded that the principles of the so-called "Graves Plan" of the county unit medical care for citizens with low incomes be recommended for adoption by the Fresno County Medical Society. After considerable discussion, it was decided to discuss the principles of this plan in the order of their presentation. The chairman then proceeded to read each one of these principles, beginning with No. 1, and concluding with No. 7. After discussion a vote was taken and each of the seven were adopted.

There was much discussion for and against various details, but little objection to the general plan as outlined.

The chairman warned the members present that heavy work would be required to complete the details for presentation to the society.

The following committees were considered necessary and were appointed by the chairman:

A subcommittee to consider eligibility for this type of medical services. This committee was to consist of two members. This motion was carried and J. R. Walker was named as chairman, with Dr. W. F. Wiese as assistant.

A Committee on "Fee Schedule," to consist of five men, representatives of the various specialties, as well as the general practice of medicine, in this community. Doctor Scarboro was named as chairman, with the privilege of selecting four others to assist him—Doctors C. D. Collins, C. H. Ingram, J. D. Morgan, and E. L. Bennett.

A Committee on Administration. This committee would have its duties, general supervision and co-ordinating the work of various subcommittees, with the understanding that it be given the privilege of selecting from among the members of the society whatever help may be needed. Doctors Sciaroni and Mitchell were selected.

A committee of three to define the power, duties, and mode of selection of the personnel of the governing board. Dr. Guy Manson was named chairman of this committee, with Dr. B. F. Walker and Dr. H. W. Ginsburg as assistants.

A Committee on Costs for Medical Services and Hospitalization. Doctor Trowbridge was named chairman, with the privilege of selecting two assistants.

* See minutes of the Committee on Medical Economics, page 59.

Doctors Neil Jorgensen and Thomas Madden were selected.

Each of these committees were approved by vote in the usual manner, and so ordered by the chairman of the meeting.

The chairman recommended weekly meetings, the time to be set by himself after due notice.

* * *

Minutes Presented at Regular Meeting on December 6.—The Committee on Medical Economics of the Fresno County Medical Society met at the University-Sequoia Club at 8 p. m. on December 5. Dr. A. E. Anderson presided.

Doctor Walker's subcommittee on eligibility for medical services reported progress, but the chairman stated that a vast amount of correspondence and investigation to gather data would be necessary before it would be possible to make a comprehensive report.

After much discussion it was decided that before going further it would be necessary to submit to the Fresno County Medical Society the proposal as to whether or not the principles of the Graves Plan met with approval, and to obtain permission to proceed with the meeting of organization and that this must be done at the next meeting of that society, Tuesday, December 6.

The following motion was formulated to be presented at that meeting: "That the Fresno County Medical Society approves the principles of the Graves Plan and authorizes the Committee on Medical Economics to proceed in the preparation of a detailed working plan, to be submitted for its approval."

The committee wishes it understood that an affirmative vote for this motion is not binding when the working plan is offered for final consideration.

Dr. C. O. Mitchell moved that the Fresno County Medical Society approve the principles of the Graves Plan and authorizes the Committee on Medical Economics to proceed in the preparation of a detailed working plan, to be submitted for its approval. Seconded by Doctor Madden.

This was followed by considerable discussion, but it was explained that an affirmative vote for this motion is not binding when the working plan is offered for final consideration.

Vote was by acclamation. All were in favor but one.

Dr. C. O. Mitchell moved that the vote be reconsidered and vote taken by roll call. Seconded by Doctor James. Carried.

Roll call vote—39 yes, 2 no.

Adjournment. ELMER J. SCHMIDT, *Secretary*.

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HUMBOLDT COUNTY

The annual meeting of the Humboldt County Medical Society was held on December 9. The officers elected for the year 1933 were: Lane Falk, president; Orris R. Myers, vice-president; J. A. Lane, treasurer; L. A. Wing, secretary; Lane Falk, delegate to the House of Delegates of the California Medical Association at Del Monte; and Orris R. Myers, alternate to the delegate.

Charles C. Falk, Jr., was elected to membership.

Following the business meeting and election of officers, a paper by Lane Falk on *Carcinoma of the Cervix and Treatment* was presented.

LAWRENCE A. WING, *Secretary*.

* *

MENDOCINO COUNTY

Accepting the special invitation of Dr. and Mrs. Cushman, the meeting of the Mendocino County Medical Society was held at the State Hospital at Talmage on the afternoon of December 9. All the licensed physicians of the county (including their ladies) had been invited.

The following physicians were present: Doctors Babcock, Bennett, Benson, Bowman, Cleland, Cush-

man, Hummel, Huntley, Kirwin, Le Baron, Olga Miller, Rea, Scudder, Strong, Toller, and Wrinkle. All of these expect to be members during 1933, excepting Doctor Huntley.

At two o'clock the ladies met with Mrs. Cushman, and the gentlemen started an inspection of the hospital.

The regular business meeting of the society was called to order by President Babcock at 3:30 o'clock. All the members were present except Doctors Van Allen and Wolfe.

The applications for membership of Doctors Thomas H. Hill and Joseph J. Kirwin were read and they were accepted as members as of January 1, 1933.

President Babcock appointed Doctors Cushman, Rea, and Bowman to be the Committee on Public Relations of the society.

Our district councilor, Dr. Henry S. Rogers, was present and discussed with us briefly the recommendations of the Committee on the Costs of Medical Care.

The ladies met with Mrs. Cushman and organized a woman's auxiliary, electing Mrs. R. A. Cushman and Mrs. Rudolph Toller, president and secretary, respectively, for the year 1933. Those present were: Mesdames Babcock, Bennett, Bowman, Cushman, Kirwin, Le Baron, Ray, Rea, Rogers, Scudder, and Toller; and Miss Huntley.

From four to six o'clock Doctors Benson, Hummel, Miller, and Toller presented six psychiatric patients, giving complete case records in addition to inviting general discussion in which all present took part.

At six o'clock Dr. and Mrs. Cushman entertained the whole group at dinner in their lovely home. President Babcock acted as toastmaster, and called on most of those present for remarks. All expressed their appreciation of Dr. and Mrs. Cushman's hospitality and hoped for a similar meeting in the near future.

At 8:30 o'clock all those so desiring attended a dance in the amusement hall of the hospital.

PAUL G. BOWMAN, *Secretary*.

* *

SAN BERNARDINO COUNTY

The December meeting of the San Bernardino County Medical Society was held on the sixth at the County Hospital in San Bernardino.

The meeting was called to order by the president at 8:10 p. m.

Miss van Zandt, librarian in charge of the southern branch of the State Medical Library located at 737 North Broadway in Los Angeles, was introduced. Miss van Zandt devoted fifteen minutes to an explanation of this new service for physicians.

The speaker of the evening, Dr. Harry H. Wilson of Los Angeles, spoke on *The Medical Service Plans of the Public Relations Committee of the State Association*. Discussion on the question of hospital and medical group practice was opened by Dr. C. G. Hilliard. There followed a long and free discussion, with numerous questions for the speaker to answer.

A vote of thanks was extended to the speaker.

Forty-five members and guests were present.

E. J. EYTINGE, *Secretary*.

* *

SAN JOAQUIN COUNTY

The stated meeting of the San Joaquin County Medical Society was held in the Medico-Dental club-rooms, 242 North Sutter Street, Stockton, Thursday, November 3, with Vice-President Doughty presiding.

It was moved by Dr. Barton Powell, Jr., and seconded, to have the screen and picture projection machine repaired. Motion carried.

The scientific program of the evening was opened by a paper on *Rational Management of Cleft Lips and Cleft Palates* by Dr. Gerald Brown O'Connor of San Francisco.

Doctor O'Connor first presented a detailed classification of such deformities and gave plausible reasons

for early operation. He said that operation must aim to close all defects in the lip, the nose and the palate. Any operation that will meet these requirements is good. But the operation on the lip must not only close the defect, but must also correct the nose and give a good cosmetic result. This is not accomplished by the old Brophy type of operation. He said that the method of wiring the palate distorts both the teeth and the upper jaw.

The paper was discussed by Doctors McGurk and English.

Dr. George Warren Pierce of San Francisco discussed *Some New Procedures in Reconstructive Surgery*.

One of the essentials in repair of facial wounds is use of the very finest size of cutaneous suture and needles. This can be left in for weeks if necessary to prevent separation of wound margins.

He recommended ambersin for the dressing of burns, on the ground that it relieves pain immediately, is readily pulled off, and does not disturb the cell growth. It is applied with a Triumph syringe while melted at 110 to 115 degrees Fahrenheit, and covers the burn like a varnish. A thin layer of cotton is applied over this, followed by another coat of ambersin and then by a thick layer of cotton and a bandage. The dressing is changed once every twenty-four hours.

This paper was discussed by Doctors Van Meter and Kaplan.

The program was concluded with moving pictures showing the development and sliding of tube grafts. The reconstruction of a lower lip lost by cancer was shown.

Thirteen members of the dental society were guests of the evening. The meeting was adjourned and refreshments served.

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The annual dinner meeting of the San Joaquin County Medical Society was held at the Hotel Stockton at 7 p. m. Thursday, December 1, Vice-President Doughty presiding.

The annual report of the secretary-treasurer was read and approved.

Dr. E. L. Blackmun reported for the tellers the results of the election of officers for 1933 as follows: J. F. Doughty, president; P. B. Gallegos, first vice-president; L. E. Tretheway, second vice-president; C. A. Broaddus, secretary-treasurer.

Board of Directors—D. R. Powell, G. H. Sanderson, G. H. Rohrbacher, R. T. McGurk, N. E. Williamson, Linwood Dozier, and T. L. Sutton.

Admissions Committee—B. J. Powell, Jr. (chairman), F. J. Conzelmann, Linwood Dozier, J. P. Hull, and G. H. Rohrbacher.

Ethics Committee—B. J. Powell, Sr. (chairman), J. W. Barnes, H. C. Peterson, D. R. Powell, and R. T. McGurk.

Finance Committee—J. V. Craviotto (chairman), J. D. Dameron, and S. E. Latta.

Program Committee—B. J. Powell, Jr. (chairman), T. L. Sutton, and G. H. Sanderson.

Delegates to State Medical Association—D. R. Powell and G. H. Sanderson.

Alternates to State Medical Association—C. A. Broaddus and R. T. McGurk.

It was moved by Doctor Kaplan and seconded by Doctor Gallegos that the society again remember the children of Doctor Maggs with appropriate Christmas gifts. Motion carried.

The chair appointed Doctors Kaplan and Sutton to procure and present the presents in the name of the San Joaquin County Medical Society.

The first paper of the evening was by Dr. Junius B. Harris of Sacramento. He spoke on the matter of the *Final Report of the Committee on the Costs of Medical Care*.

Doctor Harris emphasized the fact that, as first formed, this committee was entirely made up of men in positions having to do with the teaching of medicine or the direction of heavily endowed charitable institutions. These men had little conception of the practical side of medical care. It was only after con-

siderable effort that professional men from private practice were made members of the committee.

The majority report of the committee was largely sponsored by these first-named committee members. Doctor Harris and others sponsored the minority report, which favored governmental aid for indigents only, except in patients having tuberculosis, insanity, drug addicts, and such conditions as require long hospitalization or protection of the general public.

Doctor Harris also spoke at length of the medical legislation proposed for consideration at our next legislature.

Mr. Hartley F. Peart of San Francisco presented the matter of *Hospital and Medical Group Practice* as recommended by the Committee on Public Relations. He said that such service could be offered by the hospitals controlled by themselves or by the physicians. Medical service could be offered controlled by medical men, or both services controlled by medical men. He felt that in any event the physicians should always be in control of both and never let either hospital or medical service be sold to the public by either laymen or political groups.

Mr. Peart presented a plan whereby a county society should form a hospital association controlled by a board of directors chosen from the existing board of directors and officers of the county society. From their number a medical director is chosen annually. The latter controls and directs the hospital staff, which is made up of all the members of the county society.

By this arrangement there are no stockholders. Beneficiary certificates of membership are issued to individuals who are entitled thereby to hospital care but have no voice in the control of the association and are not otherwise participants.

The two papers promoted a great deal of discussion, led by Doctors McGurk, Kaplan, Broaddus, Blackmun, O'Connor, O'Donnell, Van Meter, and Dozier.

On motion by Doctor Van Meter, seconded by Doctor Gallegos, it was ordered that the chair appoint a committee to make a study of the various plans for hospital and medical service. Carried.

C. A. BROADDUS, *Secretary*.

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SONOMA COUNTY

The Sonoma County Medical Society held its regular monthly meeting on December 8 at the Tavern, one mile north of Santa Rosa. Twenty members and guests were present.

Dr. Henry Kreutzmann of San Francisco gave an illustrated talk on the subject of *Transurethral Prostatectomy*, exhibiting a new instrument especially adapted to this type of operation. The doctor's remarks were well received and discussed by the members present.

Regular routine business was transacted. The annual report of the secretary-treasurer showed a balance on hand of \$397.43, with a membership of forty-four paid and two honorary members.

Dr. L. H. Francis of Cotati, who has been a member of the society for many years and is now in ill health, was elected to honorary membership.

Considerable discussion ensued upon the advisability of a campaign of publicity, which matter was referred to the Executive Committee.

W. C. SHIPLEY, *Secretary*.

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STANISLAUS COUNTY

The regular monthly meeting of the Stanislaus County Medical Society was held on Friday, November 18, with eleven members present.

The election of officers for the year 1933 resulted as follows: Donald L. Robertson, president; Marion Collins, vice-president; J. A. Porter, secretary-treasurer; R. E. Maxwell, censor; R. S. Hiatt, delegate; E. F. Hagedorn, alternate.

Following the business meeting, the regular scientific program was given.

TULARE COUNTY

The November meeting of the Tulare County Medical Society was dispensed with in order to attend the Fresno County meeting, at their invitation, to hear Dr. John H. Graves of San Francisco discuss the proposed medical service study of the California Medical Association. The meeting was held at the University Club.

The essentials of this meeting are well covered in the November CALIFORNIA AND WESTERN MEDICINE for the attention of such as were unable to attend in person.

An unusually active delegation from Tulare County turned out to hear Doctor Graves.

KARL F. WEISS, *Secretary*.



VENTURA COUNTY

The annual dinner of the Ventura County Medical Society was held at 7 p. m. on December 13 at the Pierpont Inn, Ventura, followed by the regular meeting and election of officers for 1933.

Those present were: Doctors Sterling Clark, Homer, Welsh, Foskett, Hendricks, Felberbaum, Jones, Bardill, Shore, Broughton, Osborne, Armitstead, Coffey, Achenbach, D. G. Clark, L. Smolt, Bianchi, C. Smolt, Shively, Mosher, Manning, and Strong.

A resolution by the Orange County Medical Society, opposing the entrance of the State Board of Health into immunization work of schools was read. It was moved, seconded and passed, that a committee be appointed to investigate this subject and report at the next meeting.

A communication regarding the inauguration of a well-baby clinic was read. Moved, seconded and passed, that this matter be tabled for the present.

A communication from Los Angeles County Medical Society regarding their action concerning the new x-ray fees paid in industrial cases was read.

A communication from the State Medical Association advising inauguration of a Woman's Auxiliary in various counties was read but no action taken.

An outline of a medical service plan worked out by the state was read and discussed. It was moved, seconded and passed, that the society go on record as approving the principle of the health service plan and that the Public Relations Committee investigate the matter and report on it in the future.

A Communication regarding governmental restriction on the prescribing of intoxicating liquors was read. The matter was tabled.

Dr. Claude Drace of Ojai was elected to membership in the society.

The election of officers for 1933 was as follows: Royal Hendricks of Ventura, president; Artemas Strong of Santa Paula, vice-president; William Felberbaum of Santa Paula, secretary-treasurer; Sterling Clark of Ventura, delegate; G. Coffey of Ventura, alternate.

ARTEMAS J. STRONG, *Secretary-Treasurer*.

CHANGES IN MEMBERSHIP

New Members (13)

Alameda County—Hajime Uyeuama.

Contra Costa County—John Gardner Crafts.

Los Angeles County—George Harmon Lew.

San Diego County—Myrtle Spencer Lockwood, William C. Newton.

San Francisco County—Raymond L. Morris, Robert Alexander Scarborough.

Santa Barbara County—Edmund Crowley.

Santa Clara County—Orban Gayle McConnell, Olga Loos-Rosasco, Milton Herman Saier.

Siskiyou County—John Taylor Steele.

Sonoma County—Vincent Eric Johansen.

Transferred (1)

John M. Scanland, from Napa to Santa Clara County.

In Memoriam

Abraham, Henry. Died in San Francisco, December 14, 1932, age 59 years. Graduate of University of California Medical School, San Francisco, 1898. Licensed in California, 1898. Doctor Abraham was a member of the San Francisco County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.



Clarke, Fisher Randall. Died in Stockton, December 12, 1932, age 86 years. Graduate of Kentucky School of Medicine, Louisville, 1891. Licensed in California, 1891. Doctor Clarke was a member of the San Joaquin County Medical Society, the California Medical Association, and the American Medical Association.



Crittenden, Charles Frederick. Died in Alameda, November 15, 1932, age 53 years. Graduate of Hahnemann Medical College of the Pacific, San Francisco, 1902. Licensed in California, 1902. Doctor Crittenden was a member of the Alameda County Medical Association, the California Medical Association, and the American Medical Association.



Jenkins, James Fred Theodore. Died November 18, 1932. Graduate of the University of Louisville School of Medicine, Kentucky, 1878, and the University of Bishop College Faculty of Medicine, Montreal, Quebec, 1879. Licensed in California, 1885. Doctor Jenkins was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.



Le Baron, Eugene. Died in Brawley, November 28, 1932, age 67 years. Graduate of University of Maryland School of Medicine and College of Physicians and Surgeons, Baltimore, Maryland, 1892. Licensed in California, 1892. Doctor Le Baron was a member of the Imperial County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.



Miner, Henry Nelson. Died in Sacramento, November 27, 1932, age 74 years. Graduate of Northwestern University Medical School, Chicago, 1886. Licensed in California, 1886. Doctor Miner was a member of the Placer County Medical Society, a retired member of the California Medical Association, and a Fellow of the American Medical Association.



Sugarman, Herman. Died in Los Angeles, November 24, 1932, age 44 years. Graduate of Creighton University School of Medicine, Omaha, Nebraska, 1910. Licensed in California, 1912. Doctor Sugarman was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

OBITUARIES

Henry N. Miner

1858-1932

Dr. Henry N. Miner was born in Brighton, Wisconsin, May 31, 1858, and died in Sacramento, California, November 26, 1932, as a result of chronic myocarditis.

Doctor Miner graduated from the Chicago Medical College, Chicago, Illinois, in 1886 and commenced practice in Colfax, California, in the fall of that year.

Together with Dr. R. F. Rooney and the late Dr. T. N. Todd of Auburn, he was a co-founder of the Placer County Medical Society. The Placer County Medical Society minutes show that these three medical men on June 12, 1889, sent invitations to all practicing physicians in Placer County to meet in Auburn on June 27 and "then and there to form a county medical society and to take such steps as may be deemed expedient to make such an organization permanent." As a result of this action the Placer County Medical Society was formed on June 27, 1889.

Doctor Miner, after several years' practice in Colfax, moved to Berkeley, where he practiced for many years. In 1917 he returned to Placer County, since which time he has practiced medicine at Colfax and later at Blue Canyon.

Doctor Miner served the Placer County Medical Society as president during the years 1924-25. Since 1930 Doctor Miner has been a retired member of the Placer County Medical Society, by action of the California Medical Association.

Doctor Miner belonged to the rapidly diminishing members of old-time general practitioners. His loss will long be regretted by his brother practitioners and by the numerous residents of this county, whom he served so faithfully for so many years.

ROBERT A. PEERS,

Secretary, Placer County Medical Society.

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Eugene Le Baron

1865-1932

Dr. Eugene Le Baron was born in Ypsilanti, Michigan, October 6, 1865, and died in Brawley, California, November 28, 1932, of acute cardiac failure, at the age of sixty-seven. He leaves a widow, one son and one daughter.

Doctor Le Baron was graduated from the University of Maryland School of Medicine and College of Physicians and Surgeons, Baltimore, 1892, and had practiced medicine in Mexico, and for the past twenty years in Imperial Valley. He was the first physician to locate in Brawley. He was a Fellow of the American Medical Association and served as a delegate to the State Association for many years.

His loss is sincerely mourned by his friends and by the medical profession.

THE WOMAN'S AUXILIARY TO THE CALIFORNIA MEDICAL ASSOCIATION*

Official Notice

Prize Papers.—The state board of the Woman's Auxiliary is offering prizes of \$20, \$10, and \$5 for the three best papers on the subject of *The Doctor's Dilemma*. This contest is open to any doctor in California who is in good standing in the state society, his wife and children. The maximum number of words is 500, minimum number is 250. Papers should be sent to Mrs. Charles Howard, 4223 Arguello Street, San Diego, essay contest chairman, not later than March 31, 1933. The names of the judges will be announced in CALIFORNIA AND WESTERN MEDICINE. The winning paper will be read at the convention in April. Mrs. Lyell C. Kinney of San Diego is also a member of the contest committee.

* As county auxiliaries to the Woman's Auxiliary to the California Medical Association are formed, the names of their officers should be forwarded to Mrs. Clifford A. Wright, chairman of the Publicity and Publications Committee, 454 South Irving Boulevard, Los Angeles. Brief reports of county auxiliary meetings will be welcomed by Mrs. Wright and must be sent to her before publication takes place in this column. For lists of state and county officers, see advertising page 6. The Council of the California Medical Association has instructed the editors to allocate one page in every issue for Woman's Auxiliary notes.

Minutes of the Executive Committee

The Executive meeting was called to order by the president, Mrs. F. E. Coulter, at 10 a. m., September 24, at the Vista Mar Monte Hotel, Santa Barbara.

Those present were Mesdames Coulter, Stevens, Teass, Clark, and Doane. In the absence of Mrs. Quaintance Mrs. Coulter requested Mrs. Doane to act as secretary of this meeting.

The president called attention to the fact that because the ninth district had not sufficient delegates in convention to elect their councilor said office was vacant.

A motion was made by Mrs. Stevens, seconded by Mrs. Clark, that Mrs. Cushman of Ukiah be appointed councilor for the ninth district. The motion was carried.

Respectfully submitted,

HELEN DOANE.

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Minutes of the Meeting of the Board of Directors Fifth Year, Second Meeting

A meeting of the Board of Directors of the Woman's Auxiliary to the California Medical Association was held at 10:30 a. m. on Saturday, September 24, 1932, at the Vista Mar Monte Hotel in Santa Barbara.

In the absence of Mrs. Quaintance Mrs. Alden was asked to act as secretary *pro tem*.

The meeting was called to order by the president, Mrs. F. E. Coulter, and the roll call was responded to by the following officers and councilors: President Mrs. F. E. Coulter, First Vice-President Mrs. Charles Stephens, Second Vice-President Mrs. Thomas Clark, Treasurer Mrs. Chester J. Teass.

Councilors—Mrs. E. A. Blondin (first district), Mrs. Clifford Wright (second district), Mrs. C. P. Proudfoot (third district), Mrs. Louis H. Dyke (seventh district), Mrs. Eliot Alden, Mrs. Dewey Powell, and Mrs. Willard N. Newman (at large).

Those absent were: Mesdames A. M. Henderson, Paul A. Quaintance, Hiram Curry, R. A. Peers, J. W. Barnes, and F. N. Scatena.

The minutes of the previous meeting were read and approved.

A report of the balloting by mail resulted in the election of these committees:

Membership and Organization—Mesdames Charles Stevens (chairman) of Santa Barbara, Willard H. Newman of San Diego, and C. P. Proudfoot of San Luis Obispo.

Program—Mesdames Thomas Clark (chairman) of Oakland, Eliot Alden of Los Angeles, and F. N. Scatena of Sacramento.

Publicity and Publication—Mesdames Clifford Wright (chairman) of Los Angeles, Philip S. Doane of Pasadena, and Hiram Curry of Santa Ana.

Public Health—Mesdames A. M. Henderson (chairman) of Sacramento, James F. Percy of Los Angeles, and Dewey Powell of Stockton.

Hospitality and Convention—Mesdames Thomas Clark (chairman) and W. H. Sargeant, both of Oakland.

An itemized account and statement of total paid-up membership was made by the treasurer. Balance on hand: \$537.89. Total membership paid to date: 829. The statements are filed with the minutes.

The president read Section 5 of Article VII.

Mrs. Charles Stevens, chairman of Membership and Organization, reported a letter from Dr. R. Manning Clarke. Mrs. Coulter recommends the approach for new county organization to be made through the medical society. Mrs. Coulter has written to eleven councilors of the medical society, who say they will indorse organization of the Woman's Auxiliary in unorganized counties. Mrs. Stevens will start procedure following the meeting of the Council.

Mrs. Louis Dyke, chairman of Associated Organizations, and Social Welfare, reports a wish to cooperate and affiliate with other clubs. In clubs of small membership and common interests, several organizations can concentrate around an objective and hold together the women of small communities.

The report on Publicity and Publication was given by the chairman, Mrs. Clifford Wright. Estimate for a year book were eight hundred copies for \$125 or one thousand copies for \$135. It was moved by Mrs. Stevens, and seconded by Mrs. Dyke, that a year book be published, the expense to be prorated according to the membership of each county publishing same, and paid out of the county treasury.

Mrs. Thomas Clark, chairman on Hospitality and Convention, stated that the next meeting of the California State Medical Association and Woman's Auxiliary will be held at Del Monte. Space for convention, rooms for executive meetings, price of luncheons, and a special rate for members will be arranged for by the chairman.

In giving suggestions for the program for the counties, Mrs. Clark gave subjects for each meeting, which will be sent to the chairman of Program of each county.

A new constitution for Orange County was accepted upon motion made by Mrs. Wright. The motion was seconded by Mrs. Dyke, and carried.

A motion was made by Mrs. Dyke, and seconded by Mrs. Proudfoot, that Mrs. Dewey Powell receive the appointment of *Hygeia* chairman for the state.

A motion was made by Mrs. Thomas Clark, and seconded by Mrs. Proudfoot, that a committee of three be formed for the essay contest, the president to act as ex-officio member. The first prize will be \$20; the second, \$10; and the third, \$5. The subject will be *The Doctor's Dilemma*. The motion carried.

It was recommended by Mrs. Stephens, and seconded by Mrs. Wright, that the fiscal year of all county auxiliaries close December 31, corresponding to the calendar year. The closing of the state treasurer's books to be five days preceding the annual meeting of the state Auxiliary. The motion was carried.

It was moved by Mrs. Teass, seconded by Mrs. Proudfoot, that all county auxiliary treasurers be instructed that March 15 is the last date upon which paid memberships can be recorded giving representation of membership by the state treasurer. This record is kept by the state and forwarded to national auxiliary for the current year. The motion was voted upon and carried.

It is under consideration that a formal invitation should be sent to all county presidents to attend the meeting of the state board, such attendance to continue until further notice.

Scrap-books containing publicity given each auxiliary concerning its activities are to be kept by committees on publicity and publication. These books are to be entered in competitive display at the meeting in Milwaukee.

The time decided upon for the next meeting of the state board will be Friday, February 17, 1933, at Los Angeles.

A motion was made by Mrs. Doane, and seconded by Mrs. Alden, that our secretary be asked to convey in writing to Mrs. Bess Mattison Behr of Pasadena our deep sympathy in the death of her father, Dr. Fitch C. E. Mattison, expressing at the same time our sincere appreciation of his enthusiastic and loyal support and his abiding faith in the ideals of the Woman's Auxiliary.

The meeting adjourned.

Respectfully submitted,

ETTA ESTILL ALDEN,
Secretary Pro Tem.

NEVADA STATE MEDICAL ASSOCIATION

O. HOVENDEN, McGill President
D. A. SMITH, Mina President-Elect
J. N. VAN METER, Las Vegas First Vice-President
FLEET H. HARRISON, Minden Second Vice-President
HORACE J. BROWN Secretary

COMPONENT COUNTY MEDICAL SOCIETIES

WASHOE COUNTY

The regular meeting of the Washoe County Medical Society took place Tuesday evening, December 13, at the El Cortez Hotel, Reno. Unfortunately the date of the meeting occurred during one of the most wintry spells that Reno has seen in many years. Many members of the profession were busy, and this, together with the weather, gave us an attendance of but nineteen members.

The society treated themselves to an informal dinner, which was greatly enjoyed. The secretary read his annual report, showing that the society had a live organization of forty-eight paid members with a very sizable balance in the treasury to its credit. After the dinner the election of officers proceeded, resulting as follows: A. R. DaCosta, president; James Thom of Carson City, vice-president; Thomas W. Bath, secretary-treasurer. The censors elected were: Fleet Harrison of Minden and George L. Servoss of Reno. The legislative Committee, consisting of Doctors Thom and Hamer of Carson City, were added to the regular committee appointed last spring. It was decided that the society should have a legal representative who should be paid a fee such as might be agreed upon. This representative and its committee would remain incognito, but their representative would always be on the alert to see that the interests of the public as well as the medical profession were served.

Upon motion of Doctor West, the secretary was instructed to write to the chief of the Narcotic Division of Washington, D. C., and to state that the Washoe County Medical Society would be glad to cooperate with that division in their effort to bring a series of uniform laws before the legislatures of the different states. The society felt that this is a matter of national undertaking and that it would be best for us to allow the Narcotic Division, through our own legal representative in the legislature, to endeavor to bring about such laws as would, in general, be in conformity with the laws of other states.

An informal discussion was participated in by a few members with reference to the prevailing subject in medical circles, namely, state medicine. While there is at present distress in Reno and some parts of Nevada as a result of the financial misfortune that has overtaken people, yet when it is considered that Nevada's population is possibly the richest per capita of any commonwealth in the world, there seems to be, owing to our isolated condition, less need for the consideration of state medicine than in any other commonwealth of the United States.

THOMAS W. BATH, *Secretary.*

Its Quick Action Prevents Deformities.—No anti-rachitic substance will straighten bones that have become misshapen as the result of rickets, but Mead's Viosterol in Oil 250 D can be depended upon to prevent rachitic deformities. This is not true of all antirachitic agents, many of which are so limited by tolerance or bulk that they cannot be given in quantities sufficient to arrest the rachitic process promptly, with the result that the bones are not adequately calcified to bear weight or muscle-pull and hence become deformed.

MISCELLANY

Under this department are ordinarily grouped: News; Medical Economics; Correspondence; Twenty-five Years Ago column; Department of Public Health; California Board of Medical Examiners; and other columns as occasion may warrant. Items for the News column must be furnished by the fifteenth of the preceding month. For Book Reviews, see index on the front cover, under Miscellany.

NEWS

Coming Meetings—

American Medical Association, Milwaukee, Wisconsin, June 12-16, 1933, Olin West, M. D., 535 North Dearborn Street, Chicago, Secretary.

California Medical Association, Del Monte, April 24-27, 1933, Emma W. Pope, M. D., 450 Sutter Street, San Francisco, Secretary.

Pacific Coast Surgical Association, Del Monte, February 23-25, 1933, Edgar L. Gilcreest, M. D., 384 Post Street, San Francisco, Secretary.

Medical Broadcasts—

American Medical Association Health Talks.—The American Medical Association broadcasts on Monday and Wednesday from 9:45 to 9:50 a. m. (central standard time) over station WBBM (770 kilocycles, or 389.4 meters).

There is also a fifteen-minute talk sponsored by the association on Saturday morning from 9:45 to 10 over station WBBM.

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San Francisco County Medical Society.—The San Francisco County Medical Society broadcasts every Tuesday from station KFRC, 4 to 4:15 p. m., and over station KJBS from 11:15 to 11:30 a. m.

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Los Angeles County Medical Society.—The Los Angeles County Medical Society will broadcast as follows: Over KECA on Monday, January 9, 11:45 a. m., and Monday, January 16, from 11:45 to 12 noon.

Medical Films.—Societies interested in medical films can obtain a copy of "Directory of Medical Movies and Their Sources" by writing to Bell & Howell Company (Educational Division), 1801 Larchmont Avenue, Chicago, Illinois.

United States Doctor Surplus Hit.—The oversupply of physicians in the United States is stressed by Dean Willard C. Rappleye of the Columbia University School of Medicine, in his annual report to President Nicholas Murray Butler, made public recently.

He pointed out that there are about 156,000 physicians in this country, twice as many per capita as any other country in the world.

Dean Rappleye urges that universities prepare to deal with the present superfluity of doctors, that a medical plan be formulated to make modern medical service available to every family.

Stanford University Popular Medical Lectures for 1933.—The Stanford University School of Medicine announces the fifty-first course of popular medical lectures (illustrated) to be given at Lane Hall on alternate Friday evenings at 8 p. m. sharp. All interested are cordially invited to attend.

The following is the scheduled program:

January 6—"Ancient Man and Ape," Arthur W. Meyer, M. D.

January 20—"The Work of the Committee on the Costs of Medical Care," President Ray Lyman Wilbur.

February 3—"Results of a Study of Nursing Care of Middle Classes," Walter H. Brown, M. D.

February 17—"Psychiatry of Crime," Herman Adler, M. D.

March 3—"Brain Surgery: Its Beginning, Development, and Present-Day Application," Howard C. Naffziger, M. D.

March 17—"The Danger of Subnutrition During Business Depression," Alonzo E. Taylor, M. D.

Dr. A. C. Reed of California Named on Group Council.—Dr. A. C. Reed, professor of tropical medicine and head of the Pacific Institute of Tropical Medicine of the University of California, has just been named to the Council of the American Society of Tropical Medicine for a period of five years.

William Beaumont Exhibit.—An exhibit in honor of the centenary of the publication of William Beaumont's (1785-1853) "Experiments and Observations on Gastric Juice and Digestion," Plattsburg, 1833, has been arranged in the library of the University of California Medical School. The first edition of this pioneer physiological classic is on view together with a number of other editions of the work, and with other material relating to Beaumont.

Lane Lectures.—Dr. J. C. Drummond, professor of biochemistry, University College, London, will deliver the next Lane Lectures early in April at the Stanford University School of Medicine in San Francisco. Professor Drummond expects to arrive in San Francisco about April 1, 1933. There will be five lectures, under the general title of "Recent Advances in the Biochemical Study of Nutritional Disorders." The lectures are to be published later.

California Medical History Seminar.—The California Medical History Seminar gave a luncheon in honor of Dr. and Mrs. Charles Singer, Monday, December 12, at the Bohemian Club, San Francisco. Dr. and Mrs. Singer, who have presented course on the history of science at the University of California during the past year, are sailing around the world on their way to their home in London. At the seminar luncheon Dr. Sanford V. Larkey, professor of the history of medicine at the University of California Medical School, presented a paper on "Berengario da Carpi," and Dr. Emmet Rixford, emeritus professor of surgery at Stanford University, discussed "Traditions of Chinese Medicine." Both papers were illustrated with books and other material. An exhibit was held in celebration of the tercentenary of the birth of Antonij van Leeuwenhoek (1632-1723).

University of California Guest Speakers.—Dr. Lewis J. Pollock, professor of neurology, Northwestern University Medical School, held a clinical demonstration at the University of California Medical School on November 2. This was attended by members of the faculty and students.

Professor J. B. S. Haldane, head of the genetical department, John Innes Horticultural Institution, London, and Fullerian professor of physiology in the Royal Institution, spoke to the faculty and students on November 16.

Dr. Charles Singer, lecturer in the history of medicine, University of London, and professor of the history of science, University of California (to December 31, 1932), spoke to the faculty and students on November 29. His subject was "Medicine and the Galilean Revolution."

Pacific Coast Surgical Association.—The next meeting of the Pacific Coast Surgical Association will be held on February 23, 24, and 25 at Del Monte. The following are the officers of the association: Emmet Rixford of San Francisco, president; Wayland A. Morrison of Los Angeles, first vice-president; W. B. Holden of Portland, Oregon, second vice-president; and Edgar L. Gilcreest of San Francisco, secretary-treasurer.

Mount Zion Hospital Lectures.—Dr. Charles Weiss, director of the Clinical and Research Laboratories of Mount Zion Hospital, will give a series of six lectures, summarizing the present knowledge of the bacteriology and immunology of infectious diseases of the eye. These lectures are open, without charge, to the medical profession and to all those who are especially interested in the subject. The lectures will be held at 8 p. m. in the assembly hall of the nurses' home of Mount Zion Hospital on six successive Thursday evenings, beginning with January 19, 1933.

American Association for the Study of Goiter Prize Essays.—The American Association for the Study of Goiter, for the fourth time, offers \$300 as a first award, and two honorable mentions for the best three essays based upon original research work on any phase of goiter presented at their annual meeting in Memphis, Tennessee, on May 15, 16, and 17, 1933. It is hoped this will stimulate valuable research work, especially in regard to the basic cause of goiter.

Competing manuscripts must be in English and submitted to the corresponding secretary, J. R. Yung, M. D., 670 Cherry Street, Terre Haute, Indiana, not later than April 1, 1933. Manuscripts arriving after this date will be held for the next year or returned at the author's request.

Laboratory Problems Discussed at Health Convention.—At the Washington meeting of the American Public Health Association, Dr. Ruth Gilbert of the Division of Laboratories and Research, reported, as referee, on the standardization of the complement-fixation test for syphilis. The technique which she presented as a basis for a standard procedure was accepted by the Committee on Standard Methods of the Laboratory Section and recommended to the section for final adoption as a standard method next year, according to the regular procedure.

Particular stress was placed in the report on the desirability of providing carefully standardized reagents which would be available for routine use or for purposes of control.

Accident-Prevention in Metal Mining.—The Demographical Division of the Health and Safety Statistics Division of the United States Bureau of Mines states: Metal mines in South Dakota were operated with a greater degree of safety during 1931 than in any other year for which records are available, except 1912, according to information received from operating companies by the United States Bureau of Mines. The accident rate declined more than 50 per cent from that of 1930. With a total of 3,843,405 man-hours of work performed by all employees at all mines reporting, the number of accidents averaged 1.30 for fatalities and 41.33 for nonfatal injuries, a combined rate of 42.63 accidents per million man-hours of exposure to risk, as compared with 88.02 in the previous year.

San Francisco Physician Manhandled in Paris.—A United Press dispatch of December 19 was as follows:

Dr. Daniel Mahoney, former San Franciscan, who was manhandled by an anti-American mob in Montparnasse recently, left San Francisco ten years ago and became a member of the staff of the Pasteur Institute in Paris.

His research work in rare diseases, particularly in brain ailments, won him an international reputation among medical scientists.

Doctor Mahoney fought with the American army in France and won the French Croix de Guerre for heroism. He is a native of Richmond, Virginia, and has been engaged in postgraduate study in Paris.

Doctor Mahoney graduated from Saint Ignatius College, now the University of San Francisco, and from Stanford and Johns Hopkins.

American Public Health Association Meeting.—Delegates returning from the sixty-first annual convention of the American Public Health Association at Washington, D. C., October 24-27, report that it was one of the best meetings ever held.

The program included many special features, as well as topics of general interest. Comparison of results with toxoid and with toxin antitoxin in the prevention of diphtheria, the standardization of serums, studies of the value of serums in the treatment of poliomyelitis, mental hygiene, and the relation of heart disease and public health were among the many problems considered. . . .

President Hoover referred to his previous contact with public health activities in Belgium and other war areas and later in working with association members in the Mississippi flood area. As a result of this experience during the flood, he has since promoted by every means within his reach the idea of establishing county health units in each of the counties in the United States. "These units were established in one hundred counties in the flood area and the extraordinarily successful results of their work confirmed the wisdom of the plan."

As a constructive measure of public economy, President Hoover favors a federal aid program designed to reduce communicable diseases, although he is generally opposed to federal subsidies. If these "diseases could be reduced by even one-third, such a reduction would repay the country more than a thousandfold its cost by its savings of the present losses in productive time of workers and its saving of the present losses to school funds by absence from classes." He emphasized also the importance of safeguarding the health of children and of developing all factors that will contribute to the production of a healthier and more virile race.

Group Working for Change in Laws on Mental Disorders.—As a further step in a campaign to amend California's antiquated laws relating to the commitment of mentally disordered persons to state institutions, a permanent committee has been appointed to sponsor public support for proposed changes in the state law.

Announcement of this committee was made recently by Dr. John Gallwey, chairman of a temporary committee, following a meeting of two hundred physicians, psychiatrists, and interested citizens in the Hotel St. Francis, San Francisco. Miss Anita Eldridge, executive secretary of the California Council for Social Work, acted as secretary.

This new group will be known as the Northern California Committee on Proposed Changes of the California Commitment Laws for the Mentally Disordered. The specific purpose of the committee is to sponsor an act which will come up before the next legislature amending, repealing, and adding sections in the state law in the light of modern knowledge of mental disorders and the way they should be handled. Among the points they make are:

The mentally disordered in California are still handled as criminals.

New York, Massachusetts, Pennsylvania, New Jersey, and other states are far ahead of California in dealing with the mentally disordered as patients in need of treatment and not as criminals.

The purpose of the proposed bill is to humanize the commitment procedure of mentally disordered persons by abolishing the use of jails for detention of the mentally disordered, by facilitating the admission of those properly eligible to treatment in mental hospitals and by the adoption of other features tried and proved in other states.

It is intended to prevent aggravation of mental disorder through criminal procedure and delay pending

hospitalization, but nevertheless to protect constitutional rights. The proposed changes are not radical but are effective in their essentials in other states.

It is expected that the changes proposed will appreciably decrease costs incident to commitment, through decreasing both the number of patients and the number of patient days in psychopathic wards pending further action, and will in no way increase such cost. The mentally disordered in California must be treated as sick persons.

CORRESPONDENCE

Subject of Following Letter: Hospitalization of Veterans

To the Editor:—Enclosed herewith find a copy of a letter as per suggestion on page 407 of the December CALIFORNIA AND WESTERN MEDICINE. It occurred to me that the new paragraph 8, dealing with Los Angeles conditions, may have a suggestive value to other communities.

Cordially yours,

C. HIRAM WEAVER,

✓ ✓ ✓

Paragraph 8 is as follows:

In the city of Los Angeles there are approximately ten standardized hospitals fully accredited by the American Hospital Association and American College of Surgeons, any or all of which at the present time are less than half filled to capacity with patients, and any of which are equipped and manned with appropriate staff members to care for the hospitalization of veterans and/or their beneficiaries; while at the same time, within approximately ten or twelve miles of the center of the city, there are approximately twenty-two hundred veterans as patients at the Sawtelle National Veterans' Hospital, 80 per cent of whom are nonservice-connected patients.

Subject of Following Letter: Etching

To the Editor:—Recently, an etching by Pennell was brought into my office. At the time it struck me as though it might have been taken off some doctor's waiting-room wall. If anybody has missed an etching by Pennell, if they will communicate with Garfield 1336 I will be glad to talk with them.

Very truly yours,

H. B. GRAHAM,

✓ ✓ ✓

Subject of Following Letter: A Copy of a Letter from the President of the Los Angeles County Medical Association to the General Manager of the Los Angeles Times, Concerning the "Health Column" of That Newspaper.

December 15, 1932.

Mr. Harry Chandler,
President, General Manager Los Angeles Times,
Los Angeles, California.

Dear Mr. Chandler:

I am in receipt of a copy of a letter of John L. Pomeroy, County Health Officer, addressed to Philip Lovell, M. D., editor of your newspaper's department "Care of the Body." A copy of Doctor Pomeroy's letter has been sent to the editor of the *Times*.

County Health Officer Pomeroy's letter discusses and answers certain unwarranted and false statements as to the practice of vaccination against smallpox and diphtheria. Doctor Pomeroy states facts and figures based upon his experience as health officer of this county over a period of eighteen years, and you as the director of a great newspaper should give this subject your serious consideration.

It is a grave menace to the public health interests of this community, and in particular to the lives and well-being of our children, that the editor of this important department should have unbridled liberty to disseminate his personal opinion upon health matters, when such views and opinions are not based on a proper foundation of education or personal experience. I am

Respectfully yours,

WILLIAM R. MOLONY,

President.

NEW HOME OF THE LOS ANGELES COUNTY MEDICAL ASSOCIATION

On December 15, the Los Angeles County Medical Association held a "house warming" in the new home of the association. From the May 5 and December 1, 1932, *Bulletins* of the Los Angeles County Medical Association, the following excerpts are taken:

From the *Bulletin* of May 5:

Permanent quarters, or a home for the Los Angeles County Medical Association, has been discussed more or less for the last twenty-five years.

Several years ago, voluntary subscriptions to the permanent quarters fund were started, and in 1923 the Board of Trustees made it a requirement in the form of an initiation fee.

Through excellent management and certain propitious circumstances, some \$98,000 has grown in value to approximately \$350,000, which makes it seem possible for the association to bring to realization and actual construction, a home and meeting place for the members of the association.

As most of you know, we own three lots on the south-east corner of Westlake and Wilshire, upon which the Wilshire Medical Building is located, and leased from the association on a ninety-nine year lease, with a net income of \$10,500 per year, increasing to a guaranteed minimum of \$15,000 per year within a few years' time.

There have been certain suggestions that the association should not enter into a building program where the burden of maintenance should be carried by the members from dues. This is obviated when we consider that our present lease with its guaranteed income may be considered as the commercial aspect of the association's building program.

In addition, we own the lot at 669 South Westlake Avenue, which, in the minds of most of the members of the Board of Trustees and the Permanent Quarters Committee, is not suitable for the erection of our permanent quarters.

We also own the old Forve property at 427 South Westlake Avenue, which has a frontage of 200 feet, and some of the members of the Permanent Quarters Committee are in favor of altering the old home, making it suitable for meeting rooms, and then erect a library unit adjoining. This property carries a mortgage of \$25,000.

It is possible for us to exchange the two Westlake lots for an excellent corner on Wilshire Boulevard directly opposite our present Wilshire holding without increasing our liabilities. This would concentrate our realty holdings into two pieces of property, one leased on a ninety-nine year lease which may be considered as the income property, the other suitable for permanent quarters. . . .

✓ ✓ ✓

From the *Bulletin* of December 1:

A home for the Los Angeles County Medical Association—at least a temporary home with meeting rooms and lounge room and offices—will be a reality within a few weeks' time.

Immediately after the property at the corner of Wilshire Boulevard and Westlake Avenue became the property of the association, the Board of Trustees decided to occupy the building that stands on this property, and voted that immediate steps be taken to place this building in condition for occupancy by the association. This work has been under way for two weeks.

The building is being redecorated, and with a few minor structural changes called for inside, should offer excellent facilities to the members during the time the library unit of the permanent quarters building program is being constructed and until such time as the permanent quarters building itself shall be erected.

The present building will provide adequate office space, and the offices of the association will be moved there the first part of December. A large room, to serve as a lounge room for members during the day and to serve at other times for section gatherings and as a meeting room for the Board of Councilors, is being equipped for these purposes. Another room is being equipped for committee meetings. This room will also serve for meetings of the Board of Trustees.

Provision is being made for those groups that are accustomed to having dinner meetings. These groups should find the quarters ideal. Arrangements have been made to provide the proper facilities for catering service for dinners and luncheons to those groups that wish to take advantage of such service.

Many of the general meetings of the association will be held in the auditorium at the rear of this building. This auditorium will seat approximately two hundred persons comfortably.

Only moderate expense is being entered into in making this building of definite value to the association. The building itself was found to be in good repair, and only minor changes were needed to make it serve its proper purpose.

Furniture to meet the present needs is being purchased at possibly the lowest prices ever asked for quality furniture, and only such furnishings are being purchased as may be used in the permanent quarters building when it is constructed.

The vacant portion of the property extending to the corner, which at present is rather an eye-sore, will be hidden from view with a little landscaping and trellis.

From the *Bulletin* of December 15:

Nineteen hundred twenty-five Wilshire Boulevard will be the new address of the Los Angeles County Medical Association on and after Thursday, December 15.

The telephone number, VAndike 1221, will remain the same as it has for years past.

It is confidently hoped that the transfer of the offices to the association's own quarters from the old address at 1008 West Sixth Street, will be made without any break in service. Plans for this transfer are now about perfected.

The annual meeting of the association, which will be held on the evening of Thursday, December 15, will open the new quarters to the membership. The doors will be open at 7:30 p. m. for a general inspection of the building. The annual business meeting of the association will be called at 8:30 p. m. Following this there will be refreshments.

Every member of the association is urged to inspect the new quarters, which serve as tangible evidence that the years of endeavor to have a permanent home for the association have at last borne some fruit and encouraging evidence that the permanent quarters as conceived by the members of years ago will within a reasonably short time become a reality.

At the meeting of the Board of Councilors on Monday, December 5, the president was instructed to name a house committee. This house committee will arrange to have the quarters made as useful as possible to the membership. It is the sincere hope of all those who have been for years interested in this movement, to make the permanent quarters a real home and a gathering place.

Several rooms have been especially equipped for this purpose. One, a large room, has been designed to serve a three-fold purpose: first, as a lounge room during the day; second, as an ideal place for section meetings; for this purpose it has been equipped for the installation of stereopticon and motion picture apparatus, which, as in the past, will be installed for any meeting that may so desire this service. All arrangements for these meetings will be worked out by the House Committee, which will attempt to encourage all sections to hold their meetings in the permanent quarters. The third use for this particular room will be for all meetings of the Board of Councilors.

Another room has been equipped for a two-fold purpose: first, for committee meetings. Catering service will be arranged for by the House Committee so that the committees meeting in this room may meet for lunches or dinners, if so desired. The second use of this room will be as the meeting room of the Board of Trustees.

To provide for the dinner meetings of sections or other groups that may arrange for the use of the quarters—if the group is too large for the committee room—arrangements may be provided in attractive surroundings in the auditorium of the building, leaving the meeting room free of all dinner service and confusion for the business meeting. The auditorium, it is expected, will afford ample room for the regular meetings of the association as a whole.

The offices of the association will be housed in the same building. Committees that hold their meetings there during the daytime will have the advantage of stenographic service whenever it is called for, so that a more complete record of their activities may be provided for, if it is desired. This grouping of the various activities of the association under one roof, with the provision for the maintenance of various committee records, it is anticipated, will help to build up a more cohesive system of activity for the association.

The entire building at 1925 Wilshire Boulevard has been completely redecorated at a very moderate cost, and has been furnished also at a very moderate cost, with furniture and furnishings that may be used in the final permanent quarters building that probably will be erected before many years are passed.

The preparing of these quarters for occupancy has been a task filled with detail and filled with a large amount of responsibility. All steps taken looking toward the transfer of the offices to the new quarters, the preparation of the new quarters for occupancy, have been taken in accord with the Board of Trustees and the committees responsible. At the last meeting of the Board of Councilors, the activities which at that time had taken place and the program which now sees completion in the new quarters, was presented to that board and approved.

It is sincerely hoped that when the membership visits this place that they now may consider their home until a more permanent structure is built, they will go away feeling they will wish to come back, again and again, and that as a temporary arrangement the new quarters will offer something that is definitely worth while.

A SAN DIEGO COUNTY PLAN FOR THE CARE OF THE INDIGENT SICK

The November *CALIFORNIA AND WESTERN MEDICINE* printed two articles on Alameda County plans to care for the indigent sick. One paper was by Dr. B. M. Black (page 330) and the other was by Dr. Daniel Crosby (page 354).

Under date of December 15, an Associated Press dispatch printed the following news item:

SAN DIEGO ADOPTS PAY-TO-FIT PURSE MEDICAL SERVICE

San Diego, Dec. 15.—(AP).—Under a coöperative plan announced today by the San Diego County Medical Association all residents of this county will be offered complete medical and hospital services after January 1 at prices to fit their pocketbooks.

A central service clinic will be set up to classify the patients. Its board of directors will be made up of representatives of the Community Chest and other welfare agencies, the Medical Association, and the county's hospitals. If its investigators find that a patient can pay only half price for an operation and subsequent hospital treatment, such services will be given for what he can pay. If he can pay nothing, he will be taken to the county hospital, as at present.

Medical Association representatives said as little as a dime or five cents a visit by member physician would be accepted as full pay if the patient could afford to pay no more. If any physician should find he could not afford to treat a large number of "part pay" patients in his clientele, the Central Service Clinic will place them in the care of physicians connected with clinics to be maintained by the hospitals for that purpose.

CARE OF WAR VETERANS

An interesting news dispatch, discussing other phases of veterans' care problems, such as were considered in the December *CALIFORNIA AND WESTERN MEDICINE* (Report by Dr. Thomas W. Bath, page 370, and Future Taxes item, page 425), appeared in the daily press of December 19, and is here reprinted. The Associated Press dispatch follows:

\$400,000,000 VET AID SLASH IS ASKED

Washington, Dec. 19.—A slash of \$400,000,000 in expenditures in behalf of war veterans without reducing by "a single dollar" payment to those who incurred disability in war service or to dependents of the soldier dead was recommended to the joint Congressional Veterans' Committee today by the Chamber of Commerce of the United States.

Chester Leasure, director of the Chamber's Public Affairs Division, read the proposal by Henry T. Harriman, president of the organization.

"We appreciate the importance of the task before your committee and sincerely trust that from your deliberations will issue recommendations to Congress in favor of the substantial reduction of the expenditures which you are examining," the statement said.

NATIONAL POLICY

"May I likewise express the hope that your search for a long range national policy, with respect to veterans and their dependents, will not delay full recognition of the urgent importance of your other objective, namely, such revision of veterans' legislation as will produce early and substantial economy without denying a single dollar to those justly entitled to benefit. We ask no reduction in expenditures for veterans whose service brought them disabilities.

"We ask maintenance of wholly adequate provisions for them, and if in any respect your committee finds there is not now full discharge of the national obligations to them, I know I can speak for our entire membership in saying we will support any increase in expenditures necessary to make good the full obligation.

"We ask, and our committee asks, only reduction which we believe will be in the interests of everyone, including the veterans themselves.

"It cannot, we submit, be in the public interest that federal expenditures should be made on account of disabilities which result from the normal hazards of civilian life for persons having in every sense a civilian status."

The chamber's specific recommendations for savings were:

Denial of compensation for all disabilities not clearly proved to be service-connected.

SCIENTIFIC BASIS

Repeal of legislation granting hospitalization for disabilities not attributable to service.

Limiting government life insurance "to the purpose for which it was undertaken."

Placing compensation paid dependents on a basis of necessity and service-connected disability or death.

Returning disabled emergency officers to a disability compensation status.

Placing veterans' relief legislation on a scientific basis with consequent reduction in administrative costs.

The savings outlined from such changes were:

Spanish-American War pensions, \$112,843,000.

Compensation for presumptive disabilities, \$75,000,000.

Allowances for nonservice-connected disabilities, \$104,278,000.

Emergency officers' retirement pay, \$6,798,000.

Hospitalization, \$40,000,000.

Hospital construction, \$5,000,000.

Reinstatement of military and navy insurance, \$40,000,000.

Administration, \$20,000,000.

U.S. CONGRESS SETS UP FREE HOSPITAL FOR ITS MEMBERS

The House of Representatives is becoming increasingly health conscious, as indicated in accounts filed by the clerk of the House.

The House has set up a miniature hospital with a physician and three assistants in charge to provide complete medical care for members and their families. Service is free and competent.

The House has reduced the expense of this service to a comparatively low figure by having the Navy Department detail Commander George W. Calver, a naval surgeon, and three enlisted men as assistants. The third assistant was added a year ago. Each is paid, in addition to navy pay, \$30 a month by the House to cover the cost of meals at the capitol.

\$2,500 FOR MEDICINE

Doctor Calver is allowed \$2,500 a year by the House for medicines, expenses, supplies, and the extra pay of his three assistants. Originally, when the office of attending physician was created, Congress allowed \$1,500 a year for medicines and equipment. Then it was increased temporarily to \$2,500 to permit the physician and his two assistants to engage in special courses of study during the summer recesses of Congress. When some members a year ago attempted to curtail this to the original \$1,500, the attending physician explained that he had understood the office was to continue to receive the additional amount.

VACATION TRIPS

Out of this fund the attending physician keeps up an automobile for making calls. During the long summer recess of 1931, he visited Boston hospitals. One of his assistants spent three weeks at the University of Wisconsin for special study. Board and room and the cost of an automobile trip there was turned in as a legitimate charge against the House appropriation. Other trips by members of the staff were made to New York and Princeton University.

In four years' time Doctor Calver has been able to equip a modern treatment room in the capitol. Within the last year he has installed a diastoscope and an infra-red lamp, in addition to numerous pieces of less expensive equipment.

This service, plus the fact that Walter Reed hospital, one of the crack army institutions, and the naval hospital here are at the disposal of members of Congress—and what with the large quantities of aspirin tablets which the doorkeeper provides in the House

cloak rooms—enables the legislators to keep in the very best fighting trim. The House also has one member, who is a physician, Dr. William L. Sirovich, Democrat, New York.—*News Dispatch*.

DENTISTS TOLD OF CALIFORNIA HEALTH PLAN

GROUP IDEA FOR MEDICAL AND HOSPITAL CARE EXPLAINED—DR.

GRAVES, HEAD OF STATE BOARD, GIVES DETAILS—COUNTY

PROFESSIONAL BODIES COULD FIX OWN RATES

Details of the California Medical Association's plan to provide complete medical service and hospitalization to persons of moderate means were explained to the Southern California State Dental Association recently by Dr. John H. Graves of San Francisco, president of the State Board of Public Health and former president of the State Medical Association.

Dentists from various Southern California counties, believing the medical association's plan can be applied to dentistry, attended the meeting at University Club.

Each county medical society, Doctor Graves explained, would fix its own rates, and determine the maximum income it regards as coming within the scope of "moderate means." Persons whose financial status exceeded this maximum, would not be eligible.

PROFITS ABOLISHED

"At the outset," Doctor Graves said, "profits that would go to agencies, insurance companies, promoters, etc., are abolished. The medical profession, through such county units as desire, will offer professional service to the people whose income for the past year is below a certain fixed sum, providing ascertainable assets are below fixed amounts. Professional service means physicians' and surgeons' attendance only, for any and all types of disease and injury, where the individual is not protected under the Workmen's Compensation Act.

"Each county medical unit will operate as a partnership, and the division of moneys received will be on a unit basis—a fixed amount for each type of service. Such a plan definitely answers the critics of our profession, who assert that we are not interested in coöperative efforts of a social nature."

HOSPITALIZATION PLAN

Doctor Graves also described how the partnership of the county medical society can promote, among the hospitals in the county, a hospitalization plan, so that a subscriber could assure himself either of medical service, hospitalization, or both.

"The hospitals would form a coöperative organization," he said, "offering to the public ward accommodations with ordinary laboratory, operating-room, and floor-nursing service for all diseases not termed contagious; and all injuries where persons are not covered under the Workmen's Compensation Act, for periods of one, two, and three months' duration."

The patient would select his own physician, from the membership rolls of the county medical society, and his own hospital, from the list of those coöperating.

SAVING ANTICIPATED

Such a plan, it is contended, would reduce the operating expenses of county hospitals by reducing the number of patients who now are obliged to seek treatment in tax-supported institutions. Additional savings would be made by cutting down the number of public school absentees through prompt medical attention.

One feature of the proposal, it was explained, is that a subscriber would not be entitled to obstetrical service until after one year's enrollment. That would serve as protection for the physician and the hospital against possible cases of what might amount to attempted fraud.—*Los Angeles Times*.

TWENTY-FIVE YEARS AGO*

EXCERPTS FROM OUR STATE MEDICAL JOURNAL

Vol. VI, No. 1, January, 1908

From some editorial notes:

Sixth Volume.—With this issue the journal enters upon its sixth volume, and it bespeaks a continuance of that friendly help and coöperation which you have given it in the past years, for the present year, and for those to come. That it has prospered more than, six years ago, we could have thought possible, is largely due to your aid and your assistance. . . .

The Plague Situation.—The plague situation remains about as it was, though there are certain symptoms of improvement in general conditions. In San Francisco the average number of new cases and infected rats seems to keep up, but rats are becoming scarcer and there has been a decided decrease in the flea population, naturally to be expected with the coming of the winter rains. A number of desirable ordinances have been drawn up and presented to the Board of Supervisors, and it is expected that these will be passed in due season. . . .

From an article on "The Rat and His Parasites: His Role in the Spread of Disease, with Special Reference to Bubonic Plague" by B. J. Lloyd, M. D., Assistant Surgeon, United States Public Health and Marine Hospital Service.

It has been found in the application of sanitary measures in various places that poisoning rats, disinfecting, medical inspection, etc., while they are very important auxiliaries, are not nearly so effective as the tearing out of filthy habitations and the reconstruction of such buildings on good sanitary principles. . . .

From an article on "The Continuance of Plague in San Francisco" by W. C. Hassler, M. D., San Francisco.

On February 29, 1904, the last verified case of bubonic plague was noted by the Department of Health. During all of the period prior to the reporting of the first case in 1900 and up to April 18, 1906, active measures were continued looking to the sanitation of the city, particularly that area then accepted as the infected section of the city, to wit: Chinatown and North Beach. . . .

From an article on "Amputation Below the Knee Joint" by Andrew M. Henderson, M. D., Sacramento.

Although the technique of amputation is well understood and the performance of the operation is generally considered simple, none the less the results vary so greatly that we cannot but feel that there is good reason for giving some time to consideration of the various details. . . .

From an article on "Replacing of Bone and Cartilage of the Septum After Its Submucous Resection" by Edward Cecil Sewall, M. D., San Francisco.

In nasal surgery few conditions have received more attention than the deviated septum. The correction of this deformity, so often of such importance to the well-being of the patient, has been done in almost every conceivable way. I do not wish to go over the situation as it has stood in the past or as it stands today. Suffice it to say that we have a method, the submucous resection of the septum, that is familiar to us all, and one that gives results. . . .

* This column strives to mirror the work and aims of colleagues who bore the brunt of society work some twenty-five years ago. It is hoped that such presentation will be of interest to both old and recent members.

From an article on "Report of Cases of Head Injury" by O. D. Hamlin, M. D., Oakland.

In presenting this report of cases, the question of diagnosis and treatment will be mainly dealt with in that the diagnosis and treatment of intracranial disturbances depends on a thorough and practical knowledge of the physiologic functions and the anatomical locations of nerve centers. . . .

From an article on "The Medicinal Treatment of Myocarditis" by William Watt Kerr, M. D., San Francisco.

It is difficult to write a satisfactory article upon the treatment of any disease because so much depends upon the individuality of the patient, the extent of the tissue changes, the coexistence of complications or distinct morbid conditions, all of which tend to diminish the possibility of describing a course of treatment equally applicable to any two consecutive cases. . . .

From an article on "Indications of Cesarean Section" by A. B. Spalding, M. D., San Francisco.

The interest of the unborn child demands attention, and its life as well as its future health should be safeguarded by the conscientious attendant. To do this one must adopt a systematic method of examination of the pregnant woman and carry it out continuously. Too often this becomes a very monotonous procedure and the practitioner falls into the convenient habit of never troubling trouble until trouble troubles him. . . .

From an article on "Filling of Bone Cavities" by James T. Watkins, M. D., San Francisco.

It has long been recognized that bone cavities become sooner or later infected, and that they form a menace not only to primary union, but also to the subsequent healing of the overlying structures. Attempts have been made to fill them with nonabsorbable substances, such as amalgam and cement; and with a number of absorbable substances. . . .

The object of the present paper is to direct attention to a new member of the heteroplastic group, the iodoform bone plug of von Mosetig-Moorhoof. . . .

CALIFORNIA STATE DEPARTMENT OF PUBLIC HEALTH

By GILES S. PORTER, M. D.
Director

A Plan for Reducing Medical Costs.*—Under conditions which now exist in our state, our nation, and throughout the civilized world, it is to be expected that serious thought will be given to much that is unfavorable in our social, industrial, and economic life. The fruits of such effort will be manifested in an improvement of methods and conditions.

The health department of a great state like California, endeavoring to maintain its efficiency in controlling epidemics, in guaranteeing to its citizens pure food and water supplies, and making use of all scientific means for the protection of the health of its citizens, has under present conditions many unusual problems to solve.

The expense of all such activities is borne by the public, and never before has it been more necessary to combine painstaking economy with efficient service. This combination of economy and service pertains not only to public departments, but to the personal affairs of every citizen. New and successful methods for obtaining this end will be developed in the stern school of necessity.

Sickness, although inevitable, is generally unexpected; and to the average citizen of moderate means

* By John H. Graves, M. D., president California Board of Public Health.

it is always a heavy liability, and not infrequently a financial catastrophe.

Place emphasis upon the average citizen of moderate means, because the indigent, in our moderate polity, are well cared for in the magnificent tax-supported hospitals that abound throughout the land. In these hospitals, every facility of modern scientific medicine, no matter how extensive or expensive, is at all times available for the treatment of indigents. Medical and surgical service of the highest quality is rendered by a wholly unpaid or a much underpaid medical profession.

On the other hand, those of our citizens who can still be classified as rich, are amply able to meet the expense of sickness without serious financial inconvenience.

The great majority, however, is composed of people of moderate means; and there has existed for a long time a real need of some system to furnish medical, surgical, and hospital care which will enable them to defray the cost thereof without financial wreckage.

The state-controlled, politically operated, compulsory or voluntary systems in vogue in Europe, viewed from the American standpoint and standards, fail utterly in giving efficient treatment. They are objectionable from almost every standpoint, and wholly disappointing.

An effort to introduce them into this country met with complete failure, and the idea has been relegated to the limbo of discarded theories, where it properly belongs.

Because of the crying need for some system of delivering adequate medical care and hospitalization at a cost which will not be burdensome, a horde of promoters has sprung up in this country, rather recently. For the purpose of making rich profits for themselves, they have offered to the people, through the agencies of so-called "Medical Service Companies," "Sickness Insurance Corporations," etc., a service advertised as adequate, efficient, and economical, based on the idea of selling the physician's services to the sick, with a large profit for the broker. Generally, they have failed utterly in meeting the promises made in their extravagant advertisements.

Many of them are fly-by-night concerns, which both deceive and defraud honest people who are making an honest effort under distressing conditions to insure means of discharging their obligations.

Considering the fact that only about 20 per cent of all moneys paid for sickness ever reaches the pockets of the medical profession, the doctors of California cannot be too highly commended for the action just taken by the California Medical Association in the development of a plan for reducing medical costs. This is the official organization of the medical profession in this state. It has developed and presented a plan by which people of moderate means may receive the best of medical and surgical treatment and hospitalization, when necessary, on an insurance principle that makes it comparatively easy for every person of moderate means or reasonable employment to command immediately, when necessary, the best that modern medical science can provide.

The plan proposed allows to the individual the free choice of any physician or surgeon who is an associate of his county medical society, and who is willing to treat people of moderate means.

The wide commendation, both in the news and editorial columns of the public press, together with the unqualified endorsement of so many of the leaders of the medical profession, throws a rainbow of promise, both for the people and the doctors, over what has been an unsatisfactory and unhappy situation.

Outspoken opposition from any but piratical promoters, whose profits are jeopardized, is yet to be heard; but in the profession which has for years been so progressive but yet cautiously conservative, there will be found an occasional individual who is in silent opposition for this, that, or the other fancied reason to any constructive activity. To obstruct, to delay, and

eventually to defeat, is the purpose of such; and their early removal from the field is a consummation to be desired.

Fortunately, the great preponderance of professional opinion, with farseeing wisdom, has been such that it has been possible for this great medical association to present a practical and popular plan. By furnishing, under all conditions, a prompt and adequate medical service, it puts both the public and the profession in an enviable position. The patient is not embarrassed by unpaid doctor bills, and the medical profession is no longer handicapped by inadequate returns for necessary service.

From the standpoint of a health official, such a plan means that a prompt, efficient, prepaid service will be opened to all such citizens; that minor physical defects will be discovered early and remedied promptly; that infectious diseases will be seen promptly by competent practitioners; that epidemics will cause fewer deaths; that the work of health departments and health officials will be less arduous and infinitely more satisfactory.

Viewed from the standpoint of the taxpayers, it means that the tremendous expense in the public schools, due to the loss of time from illness, will be greatly reduced; that the burden of care in public institutions for those who have become financially exhausted because of sickness, will disappear.

Few taxpayers yet realize what a tremendous financial burden is placed upon their shoulders for furnishing medical and surgical care and hospitalization to such citizens, to say nothing of the large number of people who are resorting to tax-supported hospitals for treatment, in spite of the fact that their incomes are more than ample to provide adequate care under the proposed plan.

It is asserted by competent accountants that in some of the tax-supported hospitals where all service is free, the cost of providing hospitalization runs as high as five dollars to ten dollars per day per patient. The situation has become so acute that one investigator states it is a question as to who most needs relief—the patient or the taxpayer.

Viewed from the standpoint of the citizen, it means cessation of worry over the problem of sickness or accident that may befall himself, his family, or his dependents. It should be the hope of all that there will be no unnecessary delay in putting the plan into operation.

California White House Conference Is Held.—The opening meeting of the California White House Conference on Child Health and Protection was held in San Francisco at the call of Hon. James Rolph, Jr., Governor of California, on November 11 and 12. The first session was a dinner meeting held at the Palace Hotel. Miss Lucy Stebbins, dean of women, University of California, Berkeley, presided. Addresses were made by Dr. Giles S. Porter, director of the State Department of Public Health; Mrs. Rheba C. Splivalo, director of the State Department of Social Welfare; Mr. Vierling Kersey, director of the State Department of Education; Dr. Robert E. Swain, acting president of Stanford University; Mr. Edward G. Rainey, State Superintendent of Banks, and Mr. Jefferson E. Peyser, supervisor, representing Mayor Angelo Rossi of San Francisco. President Robert G. Sproul of the University of California, chairman of the Conference, and Mr. Leland W. Cutler, chairman of the Governor's Advisory Committee, were unable to attend.

President Herbert Hoover left Stanford University for Washington that night and the following telegram was received from him:

I send cordial greetings to the California White House Conference on Child Health and Protection. It has been a chief interest of my administration to organize the White House Conference on this subject so near to the hearts of all our people and so vital to the future of our nation. The thousands of devoted men and women who have given their time and knowledge to this work deserve the grateful appreciation of the whole country. Many

state conferencees have been held carrying to every part of the nation a fresh inspiration in this high service and the further extension of newly organized knowledge for the benefit of childhood. Your conference in California will be one of the most important of all these and I wish you Godspeed in your unselfish and invaluable labors.

Two hundred representative individuals attended the opening session and there was marked enthusiasm over the prospect of conducting a two-year program throughout the state in the interest of child health and protection.

On the following day, November 12, both morning and afternoon sessions were held in the Civic Auditorium. Dr. Herbert R. Stolz, chairman of the Institute for Child Study at the University of California, presided in the absence of President Robert G. Sproul of the University of California. The morning session opened with an address, "The Value of State-Wide Organization" by Dr. R. E. Swain, acting president of Stanford University. Dr. Tully C. Knoles, president of the College of the Pacific at Stockton, talked upon the subject of "Community Responsibility." Dr. Giles S. Porter, director of the State Department of Public Health and chairman of Governor Rolph's personal representatives, discussed "The Health Workers' Field in the Conference." "What the Social Worker Can Contribute" was the subject of an address by Mrs. Rheba Crawford Splivalo, director of the State Department of Social Welfare, and Mr. Vierling Kersey, director of the State Department of Education, talked upon the subject "What the Educator Can Contribute." The plan of organization of the Conference was outlined by Mr. N. P. Neilson, Superintendent of Physical Education in the State Department of Education. At the end of the morning session, Dr. William P. Shepard, secretary of the Western Branch of the American Public Health Association, summarized the morning's discussion. Group meetings were held in the afternoon. The Governor's White House Conference Committee and the County Executive Committee members met in Polk Hall. Dr. Robert E. Swain presided at this session and Mr. N. P. Neilson led the discussion. Section meetings were held as follows:

Medical Service—Dr. William Palmer Lucas, chairman.

Public Health Service and Administration—Dr. John J. Sippy, chairman.

Education and Training—Dr. Edna W. Bailey, chairman.

Social Welfare—Mrs. T. E. Shucking, chairman.

At three o'clock the individuals in attendance assembled in a general meeting at which plans of work were presented by the section chairmen. Under the general state plan, the conference will be carried to the people in every community of the state. The organization, as developed by the State Executive Committee, calls for this accomplishment. District conferences will be held in Los Angeles, Fresno, Oakland, and Sacramento. A county conference will be held in each county of the state and one or more conferences will be held in each community of the state. The community conferences, in fact, constitute the key conferences. Local conditions influencing child welfare will be evaluated against the standards and criteria which were established in President Hoover's original White House Conference. It is desired that members of each community of the state shall be informed upon child welfare and that their interest in a forward-looking program shall be developed. It will require at least two years for the complete program to be worked out.

After the community conferences have been held, county conferences will be called for the purpose of gathering recommendations and reports of accomplishments in the various communities. After the county conferences, district conferences will be held for the purpose of gathering together and summarizing the results that may have been achieved in the various counties. Finally, another state conference will be held at which a new program of child health and protection for California will be developed. Following is an

outline of the four sections into which the conference is divided, together with the principal committees that will work under each section:

Section 1. Medical Service:

- Growth and Development
- Prenatal and Maternal Care
- Medical Care

Section 2. Public Health Service and Administration:

- Public Health Organization
- Communicable Disease Control
- Milk Production and Control

Section 3. Education and Training:

- The Family and Parent Education
- The Infant and Preschool Child
- The School Child
- Vocational Guidance
- Child Labor
- Recreation
- Physical Education
- Special Classes
- Youth Outside of Home and School

Section 4. Social Welfare:

- Community Organization for Social Welfare
- Physically Handicapped
- Mentally Handicapped
- Dependency and Neglect
- Delinquency and Probation
- Foster Homes and Adoption
- Institutional Relations
- Family Guidance and Coöperation

... Following are the names of the state section and committee chairmen:

Section I:

- Medical Service, Dr. William Palmer Lucas
 - A. Growth and Development, Dr. Herbert Stolz
 - B. Prenatal and Maternal Care, Dr. Adelaide Brown
 - C. Medical Care, Dr. Henry Dietrich

Section II:

- Public Health Service and Administration, Dr. John J. Sippy
 - A. Public Health Organization, Dr. J. D. Dunshee
 - B. Communicable Disease Control, Dr. Walter H. Brown
 - C. Milk Production and Control, Dr. Sam H. Greene.

Section III:

- Education and Training, Dr. Edna W. Bailey
 - A. The Family and Parent Education, Mrs. W. J. Bingham
 - B. The Infant and Preschool Child, Dr. Lovisa Wagoner
 - C. The School Child, Dr. Anita Laton
 - D-1 Vocational Guidance
 - D-2 Child Labor
 - E-1 Recreation, Mr. Charles Davis
 - E-2 Physical Education, Mr. Charles Davis
 - F. Special Classes, Mrs. B. C. Clark
 - G. Youth Outside of Home and School, Miss Josephine Randall

Section IV:

- Social Welfare, Mrs. T. E. Shucking
 - A. Community Organization for Social Welfare, Mrs. Walter Van Dyke
 - B-1 Physically Handicapped, Mrs. Leo Youngworth
 - B-2 Mentally Handicapped, Miss Louise Lombard
 - C-1 Dependency and Neglect, Miss Louise Drury
 - C-2 Delinquency and Probation, Mrs. A. S. Musante
 - D-1 Foster Homes and Adoptions, Mrs. Grace Y. Hudson
 - D-2 Institutional Relations, Mrs. Harry Geballe
 - D-3 Family Guidance and Coöperation, Mrs. C. E. Hunter

BOARD OF MEDICAL EXAMINERS OF THE STATE OF CALIFORNIA

By CHARLES B. PINKHAM, M. D.
Secretary-Treasurer

News Items

Reports relate that J. Lane Kendall, licensed chiropractor, was on November 18, 1932, sentenced to pay a fine of \$600 or serve two hundred days in the county jail, following his conviction of contributing to the delinquency of a minor, he electing to serve the county jail sentence.

The individual who called himself Dr. Alfred A. Hesse, former intern at the San Joaquin General Hospital, must have made his way to New York City, inasmuch as the Cadillac sedan which he was purchasing on installment payments from a Los Angeles firm was reported found in a New York garage. A warrant is pending against Hesse, charging him with violation of the Medical Practice Act.

According to report, Mario S. Llano was arrested in San Francisco, November 14, by Inspector Jarrett of the State Narcotic Division, who is said to have found in his possession a number of cans of marihuana. In addition, he was said to have found "many volumes of books, laboratory paraphernalia, test tubes, etc.," some of which assertedly belonged to the San Francisco Hospital. According to information, Llano was violating the Medical Practice Act, in addition to the charge of violating the State Narcotic Law.

Manuel Machado, convicted in Santa Barbara County in 1929 on a charge of violation of the Medical Practice Act, which conviction was sustained on appeal (99 Cal. App. 702) has been located in the United States Industrial Reformatory, Chillicothe, Ohio, where he is said to be incarcerated on a counterfeiting charge. Machado's chiropractic license was revoked January 17, 1930. (Previous entries, December, 1928; May, June, and September, 1929.)

E. Osmun, referred to in "News Items" of the December, 1931, issue, as assertedly victimizing physicians, from whom he collects a small fee under promise of making them examiners for various insurance companies, was reported recently sentenced in Los Angeles to twenty days in jail, following his plea of guilty to petty theft charges. It is said after he has served the twenty-day jail sentence in Los Angeles, he will be taken to San Diego to answer to a complaint filed November 30, 1932, based upon an allegation that Osmun had obtained \$3.99 from each of about fifteen physicians in and about San Diego on pretense that their names would appear in a publication called "National Insurance Examiner," which, so far as we have been able to ascertain, is nonexistent.

On December 5 the Appellate Court, First Division, affirmed the judgment of the Board of Medical Examiners, entered July 8, 1931, suspending the license of Christopher Howson for a period of one year, based upon aiding and abetting an unlicensed practitioner.

"Walking out of the courtroom of Justice L. A. Maynard today, after receiving a sentence on a charge of practicing medicine without a state license, L. C. Hornschu, fifty-three, of San Francisco was rearrested by Police Chief A. F. Herritt on a warrant sent here from Sonoma, charging a similar violation. . . . The court decreed (on the Napa charge) sentence of six months, execution of which was ordered suspended on condition that Hornschu cease his medical activities and not violate any other law. . . . Herritt turned the custody of Hornschu over to J. W. Davidson, Investigator of the State Board of Medical Examiners, who was to take him into Judge Small's court at Sonoma. Davidson has been gathering evidence against Hornschu, following complaints made to the medical board by persons who claim they were bilked" (Napa Register, December 1, 1932).

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No. 2

CARDIOVASCULAR DISEASE IN DIABETES MELLITUS*

AN ANALYSIS OF FOUR HUNDRED AND
TWENTY-FIVE CASES

By JAMES W. SHERRILL, M. D.
La Jolla

DISCUSSION by Howard F. West, M. D., Los Angeles;
H. Clare Shepardson, M. D., San Francisco; R. A. Kocher,
M. D., Carmel.

I

IN view of the importance of arteriosclerosis and its complications in diabetes, a series of 425 cases of diabetes is analyzed with particular reference to cardiac disease. Arteriosclerosis is responsible for 47 per cent of the deaths in diabetes today. Arterial degenerative changes can be demonstrated in practically all cases of diabetes of ten or more years' duration. By means of the x-ray, vascular changes can be demonstrated in approximately 90 per cent of the cases of five years' duration or more. In view of better diabetic treatment today, patients are living to more advanced ages, and deaths from cardiovascular diseases are gaining rapidly over those from coma and gangrene. In this report special attention is given to angina pectoris, coronary thrombosis, and hypertensive and arteriosclerotic heart disease. In view of their frequency in diabetes we should regard them as diabetic complications rather than intercurrent diseases.

ANGINA PECTORIS AND DIABETES

A most comprehensive report of the occurrence of angina pectoris in diabetes was made by Howard Root in 1931.¹ He collected 210 cases, three per cent, from among 7000 diabetic patients admitted to the Deaconess Hospital between the years of 1895 and 1931. We have observed sixteen cases, 3.8 per cent, in 425 cases. Only those patients with clear cut history of substernal pain, or radiating pain produced by exertion and relieved by the nitrites are considered.

* From the Scripps Metabolic Clinic, La Jolla, San Diego, California.

* Read before the General Medicine Section of the California Medical Association at the sixty-first annual session, Pasadena, May 2-5, 1932.

The duration of diabetes bears considerable relation to the onset and occurrence of angina. Angina most commonly follows diabetes. Diabetes as an etiologic factor in the production of angina is very well shown by the fact that angina began on an average of 9.1 years after the onset of diabetes, in one instance twenty-five years after. There are several reports in the literature of deaths from angina pectoris and coronary occlusion, verified by autopsy, in diabetic patients between the ages of 20 to 30. In each instance the duration of diabetes approximated ten years.

From the standpoint of prognosis considerable gravity must be attached to the occurrence of the two. In our series of fatal cases the duration of life was only 2.5 years after the onset. One noteworthy feature is the mildness of diabetes at the onset of angina. Many observers, however, have commented upon the severity of coronary sclerosis noted at autopsy, which probably accounts for the relatively short duration of life after its onset. Again, the short duration may be accounted for by insufficient history-taking on the part of the physician. Careful investigation may reveal incipient anginal attacks antedating the well defined attacks by many months or years.

With the increasing longevity of the diabetic during the ten years of insulin treatment, coronary disease is fast taking its place at the top of the list of diabetic complications. Postmortem statistics give a reliable index to the actual underlying pathologic processes in the sclerotic heart, and give us a good idea as to the complications which are most likely to ensue in the living. Nathanson² performed 100 autopsies in diabetic individuals and reported an incidence of 41 per cent with severe coronary sclerosis. In cases over fifty years of age 52 per cent showed sclerosis. Such incidence vastly exceeds the general average noted in the nondiabetics, as shown by his comparison with 249 consecutive hospital autopsies above the age of fifty in which the incidence was only 8.2 per cent. Blotner³ recorded thirty-five instances, or 45 per cent, of marked coronary disease in seventy-seven fatal cases of diabetes necropsied at Peter Bent Brigham Hospital. Age was not a factor in guaranteeing immunity to the

disease since two patients in the series were under thirty-six years of age. Russell Wilder⁴ reported fifty-eight autopsies in diabetes, in seventeen of which there was extensive coronary sclerosis and advanced myocarditis. Ophüls⁵ found eighteen cases of recent infarct and eight healed infarcts in thirty-four diabetic patients. Blotner's series³ of seventy-seven diabetic autopsies show eight cases of coronary thrombosis. Warren and Root⁶ found occlusion of a main branch of the coronary artery in three instances in forty diabetic autopsies. Levine⁷ reported a group of 145 cases of coronary thrombosis, in thirty-four of whom (23.7 per cent) glycosuria was found, or where diabetes previously had been known to exist. As an etiological factor in the production of thrombosis, diabetes was second only to arteriosclerosis.

CORONARY OCCLUSION AND DIABETES

In the group of cases of coronary occlusion reported here the average age at the time of accident was 62.8 years, and diabetes was known to exist previously on an average of 9.2 years. In the Levine group of 145 cases of coronary thrombosis without diabetes the average age at onset was 57.8 years. This data would indicate that coronary disease does not develop earlier in the diabetic than in the nondiabetic. However, such assumption cannot be correct, as shown by the early occurrence of coronary disease in diabetes at autopsy. The reason for the occurrence of the occlusion at a late date in the diabetic can probably be accounted for by his low level of physical activity, secondarily induced by his dietary restrictions. Coronary occlusion is prone to occur in the relatively mild form of diabetes and particularly in patients who are known to exhibit only traces of sugar occasionally over a considerable period of time. Fortunately for the diabetic it has been observed that his chance for recovery from acute coronary occlusion is as good as that of the nondiabetic. The fact that the presence of diabetes does not alter the prognosis leads us to believe that diabetes itself is not a predisposing factor in coronary occlusion, but is merely an accompaniment of coronary disease. It is well known that transitory glycosuria frequently occurs in acute coronary thrombosis and must not be confused with diabetes mellitus. In the series presented here we were careful to exclude such glycosurias. The association of acidosis in acute coronary occlusion is not frequently encountered. Only two of our cases showed heavy traces of acetone and traces of diacetic acid in the twenty-four hours following the occlusion; but acidosis of sufficient degree to produce clinical manifestations was not observed. These cases were easily controlled with small doses of insulin.

DANGERS OF HYPOGLYCEMIA IN ARTERIAL DISEASE

From our own experience and the accumulating evidence in the literature, it is very timely to emphasize the dangers of hypoglycemia as a pre-

cipitating cause of angina pectoris and coronary occlusion. Hetenyi⁸ in 1926 reported two cases of angina in which attacks were precipitated by moderate insulin dosage and the pain was quickly relieved by intravenous glucose injections. Joslin⁹ reported a woman of 70 brought into the hospital unconscious, with hypoglycemia of .030 per cent. She had previously received insulin three times a day. In spite of intravenous glucose, she died after a few days and autopsy showed a fresh infarction of the heart. Labbe recently called attention to the danger of cardiac complications and accidents associated with acute or prolonged hypoglycemia. Modern¹⁰ and Turner¹¹ demonstrated clearly that typical angina pectoris could be produced by prolonged hypoglycemia and relief was quickly effected by the administration of glucose. Vlotner³ cited three cases of acute coronary thrombosis which terminated fatally a few hours following the administration of insulin. Each was proved by autopsy. The amount of insulin given ranged from a single dose of 80 to 100 units given in single or divided doses. We have unfortunately observed coronary occlusion in two patients during hypoglycemia; one resulted fatally.

With such obvious information at hand, we should constantly keep in mind that hyperglycemia should be handled very conservatively so that rapid lowering of the blood sugar level be avoided. This is especially true of elderly individuals with long standing diabetes, particularly if there is any degree of peripheral arteriosclerosis. Such cases commonly respond to trivial insulin dosages and at times it is wise to treat them cautiously from a cardiovascular standpoint rather than for diabetes. One must not be too hasty in diagnosing diabetes in an aged person who exhibits obvious signs of coronary disease and arteriosclerosis, simply because glycosuria is discovered. This is especially true if any real degree of undernutrition exists. Too frequently do we see such cases subjected to rigid diet programs which simply serve to exaggerate the cardiovascular disorder.

HYPERTENSIVE AND ARTERIOSCLEROTIC HEART DISEASE

Hypertensive heart disease and arteriosclerotic heart disease rank especially high among complications; in our series 7.5 per cent. This is higher than recorded by most observers. In Allan's¹² series of 804 diabetic patients admitted to The Mayo Clinic in 1930, there were seventy-three cases or 8.7 per cent, including the angina pectoris. Our data would give a much higher incidence if we exclude the fifty-six cases of children and young adults between the ages of one and twenty years. Allan's series contained only seventeen cases between these ages. Our unusually high percentage may be accounted for by the presence of a large number of elderly patients contained in our southern California population.

We have not attempted to distinguish between hypertensive heart disease and other chronic non-

TABLE 1.—Thirty-two cases of arteriosclerotic or hypertensive heart disease were observed in this group of 425 cases of diabetes, 7.5 per cent. Diabetes preceded heart disease in twenty-two instances. Percentage above standard weight does not apply to the admission weight, but to the maximum weight during life. Secondary complications were numerous and were mostly related to the vascular system.

Sex	Age on Ad'm	Dura- tion of Diabetes	Dura- tion of Heart Dis- ease	Blood Pressure	Max. Wgt. During Life	Height	Age	Per Cent Above Stand- ard Wgt.	Adm. Wgt.	Complications
F	62	11	-8	200/70	175	5-3	34	+27	.....	Hemiplegia
F	61	9	-8	200/105	175	5-2	37	+27	96	Decompensation
F	60	6 mo.	+4	202/128	240	5-2	50	+42	.....	Fibrillation, De- comp., Retinitis
M	67	1	+1	200/62	202	5-9	.....	+17	.....	Heart block
M	70	10	-9	190/80	200	5-8	55	+19	128	Decomp., Retinitis
M	58	15	-3	200/132	211	5-5	47	+30	154	Decomp., Retinitis
F	54	8	+2	220/114	215	5-10	50	+20	180	.....
M	77	4	-1	158/94	210	5-11	55	+15	202	Fibrillation, De- comp.
F	68	15	-13	190/85	185	5-1	60	+26	150	Gangrene, Cata- racts
F	45	7	-3	170/100	.....	.....	.....	.....	.....	Retinitis
F	72	2	+4	242/126	150	5-4	60	+4	132	Retinitis, Decomp., Hemiplegia
F	84	2 mo.	.....	180/80	178	5-1	60	+24	123	Cataracts, Edema
M	68	1 mo.	+1	146/80	178	5-8	60	+9	.....	Edema
M	59	8	-7	125/90	192	5-8	50	+10	178	Ulcers of foot
M	69	2	0	202/110	130	5-8	50	-20	110	Hemiplegia
M	62	5	-3	140/80	187	5-6	50	+19	120	Edema, Retinitis
F	72	3	-1	200/100	150	5-0	54	+10	108	Gangrene, Decomp.
F	65	10	-9	215/95	190	5-4	50	+24	150	Gangrene toe, Retinitis
M	72	2 mo.	.....	200/100	183	5-10	.....	+7	167	.....
M	66	8	.....	150/70	226	5-10	37	+27	172	.....
M	64	24	-23	136/60	208	5-8	40	+24	124	Gangrene
M	60	1	-1	210/120	175	5-8	.....	+8	152	Decomp., Retinitis
F	77	2	-2	.....	147	4-11	54	+10	147	Decomp., Fibrilla- tion
M	63	7	-5	118/78	250	6-4	52	+15	193	Decompensation, 1 year
F	65	8	.....	205/105	215	5-2	.....	+35	.....	Gangrene of toe
F	55	1 mo.	+7	250/150	185	5-2	54	+25	160	Essential hyper- tension
F	64	3 mo.	+3	.....	168	5-4	60	+14	130	Fibrillation
M	52	1	0	188/130	218	6-0	46	+16	139	Uremia, Alb.
M	78	8	-6	122/78	204	5-6	78	+25	168	Retinitis
F	84	4 mo.	+1	140/67	180	5-2	65	+23	158	Fibrillation
F	63	1 mo.	.....	170/115	236	5-3	63	+40	192	Edema
F	60	8	-8	142/78	174	5-5	53	+14	108	Fibrillation Decompensation

+ Indicates onset before diabetes.

valvular heart diseases. As a criterion in judging hypertensive heart diseases we have included only those cases with existing hypertension associated with hypertrophy of the left ventricle and signs of congestive heart failure. In the arterio-sclerotic group are included only those cases with demonstrable generalized arteriosclerosis associated with congestive heart failure.

As a predisposing factor in heart disease in diabetes, obesity is outstanding. In Table 1 is recorded the variations above normal standard weight for our group. The figures are not based on the patients' actual weight at the time of admission but are calculated for the stated age at the time of the maximum overweight. Hypertensive heart disease is a latent manifestation in diabetes. It is uncommon to find it in the obese diabetic, but is rather a sequel to years of combined diabetes and obesity, and occurs after the patient's nutrition has fallen to a low level.

Considerable speculative thought can be given to the triad—diabetes, obesity and heart disease. Obesity does not always lead to heart disease, but the contention that most diabetic patients with

chronic nonvalvular heart diseases give a definite history of previous obesity can certainly be upheld. Since obesity is a factor in producing heart disease in the nondiabetic, its presence would be expected to increase the incidence in diabetes. The solution of the problem of the relation of hypertension to diabetes is not an easy one. Hyperglycemia and impaired carbohydrate tolerance occurs commonly in hypertension. The view that hypertension produces arteriosclerosis is shared generally, in which event sufficient visceral sclerosis involving the pancreas might be produced and involve the function of the islands of Langerhans. The type of blood pressure occurring in diabetes is worthy of study. It is infrequent to observe the onset of diabetes with frank manifestations such as thirst, polyuria, and polyphagia, in an early case of outspoken arterial hypertension. It is common to note its onset in hypertension of the senile type; that is, blood pressures with moderate systolic elevation approximating 170 to 190, and diastolic pressures from 90 to 100.

In Table 2 the systolic blood pressures in 406 cases are charted according to decade and the height of the pressures on admission. We have arbitrarily placed all cases with pressures above 150 in the hypertensive group. Since 30 per cent of all our diabetics fall in the hypertensive group we must admit its frequency in diabetes. If we exclude the fifty-six children in the first and second decade, the percentage is much higher, viz., 35 per cent.

In the absence of experimental data and with our vague knowledge of the etiology of both hypertension and diabetes, it is not unreasonable to assume that the pathogenesis of both of these conditions is the same. The factors which induce one, such as obesity, overeating, infections, prolonged mental strain and worry, are common to both. The decade of onset is similar in each, viz., the sixth, which is good evidence in itself that when the two are associated we are dealing with two metabolic diseases which are running concurrently, rather than a single disease which is secondary to another. This feature is very well shown by Kramer,¹³ whose tabulation of the blood pressure findings in 500 diabetics and 225 hypertension cases reveal such parallel periodicity.

We have no evidence that diabetes is a specific and direct factor in increasing the arterial pressure. The frequency of hypertension in diabetes can be accounted for because of the great tendency for diabetics to acquire arterial disease. Hyperglycemia in itself is without influence upon the blood pressure in spite of the changes in blood viscosity and blood volume osmotic pressure which accompany it. If active diabetes directly influences hypertension we would expect some parallelism between the severity of active diabetes and the height of the blood pressure.

Diabetes is a direct factor in the production of arteriosclerosis, as diabetic autopsies will attest. The great frequency of arteriosclerosis in diabetes is well shown in Joslin's¹⁴ report of autopsies upon fifty-two diabetics. In seven cases which developed diabetes between the ages of twenty and thirty it is astonishing to note that 59 per cent showed arteriosclerotic changes, and 29 per cent of the individuals in this group died from causes related to arteriosclerosis, gangrene, apoplexy, etc. More astonishing still is the fact that 100 per cent of patients who developed diabetes between the ages of thirty and forty years showed arteriosclerosis at autopsy, and 50 per cent of these died arteriosclerotic deaths. Another evidence of the direct production of arteriosclerosis in diabetes is afforded by the common clinical evidences of sclerosis in diabetes of long standing. Allen¹⁵ has indicated that it is demonstrable clinically in all cases of diabetes past middle life if diabetes has existed for ten years or more. Its early onset and its frequency are ample reasons for the high incidence of arteriosclerotic heart disease in diabetes. Table 1 gives a list of some of the complications occurring in our series of heart disease,

and the high incidence of vascular accidents and complications may be readily noted.

The relation between the onset of diabetes and arteriosclerotic or hypertensive heart disease is of considerable interest. Of our thirty-two cases only eight, or 25 per cent, knew that hypertension existed before diabetes developed. In two instances the diagnosis of hypertension existed before diabetes developed. In two instances the diagnosis of hypertension and diabetes was made simultaneously. In the remaining instances heart disease appeared from one to twenty-three years after the diagnosis of diabetes. (Table 1.)

RHEUMATIC HEART DISEASE IN DIABETES

Rheumatic heart disease forms a very small per cent of organic heart diseases in diabetes. In a series of 350 diabetics Barach¹⁶ elicited a history of rheumatic fever in thirty-seven instances, and only one case of valvular disease was noted. The cardiologists tell us that the expected incidence in nondiabetics would be at least six or eight times that number. Barach believes that in the light of our present knowledge only one explanation can be offered for this extraordinary finding, and that is, individuals with certain hereditary constitutional states have tendencies to certain diseases and immunities to others.

IMPROVEMENT IN DIABETIC COMPLICATIONS FOLLOWING IMPROVEMENT IN NUTRITION

One of the most striking instances of improvement in the cardiac complication of diabetes is brought about by proper diet regulations in cases of hypertensive and arteriosclerotic heart disease. This is especially true in the long standing cases with early manifestations of congestive heart failure. There is little question but that spontaneous downward progress in many cases is brought about by too zealous treatment, especially too rigid restriction of carbohydrate and protein. Symptomatic difficulties such as palpitation, fatigue, and weakness, and physical signs such as dyspnea, tachycardia, and edema are relieved in a large proportion of cases following improvement in proper dietary regulation with improvement in nutrition. Frequently functional visual disturbances are likewise relieved. Congestive heart failure is in a large measure dependent upon the patient's general constitutional state. Strictly speaking, the improvement mentioned is due to better nutrition, but it is of value to note that when improvement does occur there is also improvement in the diabetic state, with regression of its activity. Similarly, gangrene shows regressive changes when there is improvement in nutrition following the application of better balanced diets. Gangrene is seen much less frequently today than in former years, due particularly to the gain in weight, the improvement in the peripheral circulation and improvement in the general constitutional state due to the more liberal diet afforded by insulin. Starr¹⁷ by means of

TABLE 2.—Systolic blood pressures in 406 cases of diabetes charted according to decade of onset of diabetes. Patients with systolic pressures above 150 mm. are arbitrarily placed in the hypertensive group and constitute 30.5 per cent of the total, 112 of the cases, or 27.8 per cent; the onset was in the seventh decade.

Blood Pressure	Age											No.	Per Cent	
	1-10	11-20	21-30	31-35	36-40	41-45	46-50	51-55	56-60	61-70	71-80	81-90		
70-80	5	2	....	....	....	....	....	....	....	....	....	....	7	1.7
81-90	6	7	1	....	....	....	....	....	....	1	....	....	15	3.6
91-100	5	7	2	....	1	....	1	1	....	....	....	....	17	4.1
101-110	3	11	5	3	1	2	3	2	3	5	1	1	40	9.8
111-120	....	6	5	4	4	7	6	4	6	9	1	....	52	12.8
121-130	....	3	11	2	3	5	3	8	10	15	4	....	64	15.7
131-140	....	....	2	2	1	3	5	9	12	17	1	1	53	13.0
141-150	....	1	....	....	....	....	3	6	6	15	3	....	34	8.3
														% of Hyper-tensives
151-160	....	....	....	....	....	3	1	1	6	9	6	1	27	6.6
161-170	....	....	....	....	....	3	2	3	1	7	4	....	20	4.9
171-180	....	....	....	....	1	1	3	5	....	9	5	1	25	6.1
181-190	....	....	....	....	....	....	2	3	....	6	2	....	13	2.8
191-200	....	....	....	....	....	1	....	1	1	6	2	1	12	2.9
201-210	....	....	....	....	....	....	....	3	5	8	....	....	16	3.8
211-220	....	....	....	....	1	....	....	....	....	3	....	....	4	0.9
221-	....	....	....	....	....	....	....	....	2	2	3	....	7	1.7
Age group	19	37	26	11	12	25	29	46	52	112	32	5	406	100
Decade	19	37	26	23	23	54	54	98	98	112	32	5	406	....
Per cent	4.7	9.1	6.4	5.6	5.6	13.4	13.4	24.1	24.1	27.6	7.9	1.2	100	....
Hyper-tensives: No.	0	0	0	0	2	8	8	16	15	50	22	3	124	....
Per cent	0	0	0	1.6	1.6	13.0	13.0	25.0	25.0	40.3	17.7	2.4	100	....

histamine tests has demonstrated improvement in the peripheral circulation of the feet of diabetics following certain complications.

The physiologic effects of hypoglycemia upon the heart induced by insulin are variable. These may be acceleration due to central sympathico-adrenal impulses, or slowing due to central vagus stimulation. It is assumed by Dworkin¹⁸ that while both divisions of the autonomic nervous system may be stimulated during hypoglycemia, it is the vagus influence which predominates. His observations are in agreement with the findings of Carlson¹⁹ and Cannon.²⁰ Certainly tachycardia is a common occurrence in hypoglycemia. So profoundly may the vasomotor system be affected in hyperinsulinism that John²¹ has called attention to its close similarity to hyperthyroidism.

CARBOHYDRATE AND HEART DISEASE

In planning a diet for the diabetic with heart disease, its carbohydrate content should be given immediate consideration. The great need of the heart muscle for glucose has been emphasized by our cardiologists and physiologists for many years. In 1911 Goulston²² observed great improvement in patients with advanced cardiac failure following the addition of sucrose to the diet. He contrasted the success of this form of therapy after the usual forms of diet and drugs had failed. F. M. Smith²³ demonstrated very beautifully the clinical improvement in cardiac disease, especially congestive heart failure when liberal caloric diets were substituted for the former Karrell diet. Edmunds and Cooper²⁴ studied the effect of dextrose solutions in heart and circulation failure produced by diphtheria antitoxin. The introduction of intravenous glucose produced remarkable improvement in the failing heart, even after the usual cardiac stimulants had failed. The importance of providing the diabetic heart with a continual supply of available energy is shown by the work of Cruickshank.²⁵ The normal isolated heart responded to insulin by storing glycogen provided the blood sugar did not fall to an extremely low level, while the diabetic heart did not react in such a manner unless the blood sugar was maintained well above the normal level. Other evidence for maintaining adequate nutrition to the heart is given by Hepburn's²⁶ experiments which showed that insulin increased the average sugar consumption of the heart from the average normal rate of .87 milligram per gram per hour to 3.06 milligrams per hour. Middleton and Oatway²⁷ have given us clinical and experimental evidence of the real hazard of insulin shock upon the myocardium as shown by the electrocardiogram. Eleven diabetic patients were studied with the result that there were frequent changes found in certain of the component waves, and to a less degree serious errors in the conduction time.

(To be continued)

BISMUTH IN NEUROSYPHILIS*

By H. G. MEHRTENS, M. D.,
AND
P. S. POUPIRT, M. D.,
San Francisco

DISCUSSION by Melvin R. Somers, M. D., San Francisco;
H. Douglas Eaton, M. D., Los Angeles; Samuel D. Ing-
ham, M. D., Los Angeles.

IN spite of the popularity of bismuth in the treatment of general syphilis, there have been those who made some reservations concerning its usefulness in neurosyphilis. There were those who felt that it was in this province that bismuth showed to least advantage. After a considerable experience with the ordinarily used preparations over a period of about five years, we were inclined to be rather moderate in our enthusiasm for bismuth medication. There were good results, it is true, that seemed definitely to be attributed to bismuth, but they were hardly such as seemed to us to justify any great reliance upon bismuth therapy alone.

It was at this time that we began to search about for means to intensify the action of bismuth, such as combining it with hyperpyrexia and meningeal irritation. Both of these methods increased the clinical effects, but it seemed doubtful as to just what part bismuth played in the good result.

We were inclined to hold tightly to our belief that ultimately some form of bismuth therapy would become suitable for neurosyphilitic disease for the following reasons:

First, because of its effectiveness in general syphilis. We recognized that it did not penetrate into the central nervous system, and it seemed to us unreasonable that very good clinical results could be obtained unless the medication reached the central nervous system. While we were unprepared to state that clinical improvement and ability to penetrate into the central nervous system run parallel courses, it seemed almost necessary that a drug penetrate the central nervous system before we could anticipate therapeutic results.

Second, in the treatment of neurosyphilis each case, by the very nature of its pathology, necessitates long-drawn-out therapy. It is imperative that the drugs used be such that their prolonged use shall not damage the kidneys or other vital organs. In a carefully observed series of cases treated intensively with bismuth for over a period of many months and years, no evidence of nephritis was elicited. This, of course, is quite contrary to the usual experience with mercury and arsenic.

ANIONIC BISMUTH OF HANZLIK

A search for such a penetrating drug was thus undertaken by Doctor Hanzlik with the results

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outlined by him. Having secured in the form of anionic bismuth such a drug we proceeded to put it to the test of clinical usefulness.

COMMENT ON PATIENTS TREATED

We reported¹ a series of one hundred cases treated for scientific purposes with anionic bismuth alone, that is, with iodobismutol. These patients were given iodobismutol, two cubic centimeters injected intramuscularly twice a week for one year. We did not propose to demonstrate that in the treatment of neurosyphilis no other drug should be used except anionic bismuth, because we felt that in the attack upon such a formidable condition every well recognized therapy, including hyperpyrexia, should be utilized. But we thought it would be very interesting to see what this one drug would do alone. The results, however, seemed better than any we had gotten from any cationic bismuth preparation. At the end of one year of treatment of iodobismutol the meningovascular group of thirty-two patients showed 21.8 per cent complete serologic recoveries and 78.1 per cent clinical improvement. The tabetic group of forty-six cases showed a serologic improvement of 39 per cent, but no fluids became entirely clear; 56.5 per cent stated that they were substantially improved, but in the group we had less objective improvement.

The group of twenty-two cases diagnosed parietic type may have contained some cases later classified as meningovascular. This probably explains why 50 per cent showed a serologic improvement and 58 per cent improved clinically. Twenty-seven per cent of this group went back to work. These results were definitely better than we had previously gotten with the usual bismuth preparation containing their Bi in cationic form.

Since the last report another year has elapsed. The improvements recorded above have in most cases been sustained, in many cases extended, although we did not feel justified in maintaining the whole group on one mode of therapy alone. There were no great changes in the percentages of improvements in the groups recorded in previous years. We feel that our first year's estimate of the value of the anionic bismuth therapy was substantially the same as our final one which was made after another year's observation.

INJECTION INTERVALS

In the last few years we have somewhat modified our ideas concerning the interval of injection. We started out injecting our bismuth in courses, two injections of iodobismutol twice a week for five weeks, followed by a vacation of two weeks, then repeating the course. Later we concluded that better results were obtained when no vacations were interpolated. Whenever, as occasionally occurred, a bismuth line formed on the gums or a feeling of lassitude or loss of weight took place, the injection period was lengthened to one week, or even ten days. Later, when returning energy, gain in weight, and disappear-

ance of the bismuth line on the gums had taken place, we returned to the old schedule. There were occasions, especially in virulent meningeal involvement, when it seemed indicated to give daily injections of iodobismutol for fifteen to twenty days. However, cases requiring daily injections were infrequently met with.

BISMUTH IN ELECTRONEGATIVE FORM

While Doctor Hanzlik² has definitely established that sodium iodobismuthite is anionic in character, there is reason to believe that some other bismuth drugs, such as sodium bismuth tartrate, sodium bismuth citrate, and sodium bismuth thioglycollate, under certain conditions can also yield bismuth in electronegative form.

Our last year's clinical experience has led us to consider that there is a relationship between electronegative form, permeability into the central nervous system, and therapeutic efficiency of a bismuth preparation used in neurosyphilis. The possibility naturally suggests itself that the clinical usefulness of any bismuth preparation is dependent upon its ability to assume an electronegative form.

The explanation of the varying therapeutic usefulness of bismuth in neurosyphilis may depend upon the fact that all bismuth compounds under certain conditions furnish anionic bismuth to a greater or less degree. The greater the ability of the preparation to yield available electronegative bismuth, the greater may be its therapeutic success.

CONCLUSIONS

1. Bismuth has an important place in the treatment of neurosyphilis.
2. Bismuth in anionic form penetrates into the central nervous system.
3. Our clinical experience with iodobismutol containing Bi as an anion indicates that its therapeutic effectiveness parallels its ability to penetrate into the meninges.
4. The possibility suggests itself that the clinical usefulness of any bismuth preparation in the treatment of neurosyphilis is dependent upon its ability to assume electronegative form.

¹ Stanford University Medical School.

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DISCUSSION

MELVIN R. SOMERS, M. D. (Stanford Hospital, San Francisco).—The complex physiochemical organization of protoplasm, especially in view of its colloidal nature, makes the rôle of electrolytes and ions necessarily a prominent one. From the therapeutic standpoint the problem of inorganic ion penetration and distribution is further complicated by the interposition of many semipermeable membranes between the site at which a therapeutic agent can be deposited and the site at which it is desired for it to attain, that a

therapeutic action may result. Therefore the use of a therapeutic agent selected with a thought as to the ionic state of the active element is entirely rational and a truly modern approach to the problem of chemotherapy.

In a previous report one of the authors of this paper has submitted evidence that bismuth administered in the form of iodobismutol is found in a higher concentration in the spinal fluid than when certain other bismuth compounds are employed. Since it passes through the semipermeable membranous system of the choroid plexus so readily one would expect that it would do likewise through other semipermeable membranes. Since it passes through it follows that it is not stopped and probably not concentrated by the membrane and, in the case of the kidneys, would not rise to sufficient concentration in the cells of the tubules to produce a nephritis. It is gratifying to note that no evidence of nephritis was found.

The reported serological and clinical improvement following the use of anionic bismuth make further investigation into this angle of the chemotherapy of syphilis sound promising. I wish especially to call attention to the authors' opinion that the patients do better when there are no interruptions of treatment. This also is a modern innovation, and if it were generally followed I believe there would be fewer late syphilitic complications and so-called Wassermann-fast cases.

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H. DOUGLAS EATON, M. D. (1136 West Sixth Street, Los Angeles).—The experimental and clinical results reported in the paper of Doctors Mehrtens and Pouppirt definitely demonstrate the value of bismuth in the treatment of neurosyphilis and suggest strongly that its therapeutic efficiency depends in a great degree on the form in which it is administered. This probability, together with the low toxicity of iodobismutol, led me to use it exclusively where bismuth was indicated. While my experience has been a limited one and the drug has always been used in conjunction with other treatment, it has proved very satisfactory. The patients find it very much less painful than the aqueous preparations. Clinical improvement has been more marked. As the writers suggest, continuous treatment has yielded better results than intermittent—a statement holding true, I believe, for all antisiphilitic treatment.

Doctors Mehrtens, Hanzlik and Pouppirt and their associates are to be congratulated on the scientific development of a valuable drug in the treatment of neurosyphilis.

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SAMUEL D. INGHAM, M. D. (727 West Seventh Street, Los Angeles).—Since the advent of salvarsan nearly thirty years ago the history of the treatment of syphilis has been punctuated by a succession of discoveries and improvements so that in the last few years, for the first time in history, conservative medical men are beginning to feel that it is possible at least to modify the course if not to cure the most intractable forms of syphilis, especially neurosyphilis and most particularly general paresis. Enthusiastic hopes of complete cure by one treatment with salvarsan were not realized, and each improvement has accomplished less than has been expected of it by its proponents, but the average results in patients treated persistently with modern methods are certainly better than they ever have been at any time in the past.

The use of bismuth has apparently come to stay, and with its widespread use successive improvements have been worked out in regard to the methods of its administration. It is to be hoped, and seems to be proven, that the method of treatment with iodobismutol as described by Doctors Mehrtens and Pouppirt is a distinct advance. The anionic form of bismuth

appears to have distinct advantages not only theoretically but in the results obtained in the series of cases so far reported.

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DOCTOR MEHRTENS (Closing).—I wish to thank the gentlemen who so kindly discussed our paper, and would only add that, while we now have over two years' experience with the new drug, iodobismutol, we are far from understanding all of its ultimate clinical possibilities. We now hope that the administration of the drug at the time of the appearance of the chancre, with or without the addition of arsenicals, will prevent the development of neurosyphilis. This possibility alone justifies the employment of anionic bismuth, especially in early cases.

RELATION OF PSYCHIATRY TO THE GENERAL PRACTITIONER*

By CHARLES LEWIS ALLEN, M. D.

Los Angeles

DISCUSSION by H. G. Mehrtens, M. D., San Francisco; Edward W. Twitchell, M. D., San Francisco; Sydney Kinnear Smith, M. D., Oakland.

WHILE psychiatry is still largely empirical, it is steadily becoming more scientific and is successfully habilitating itself as a branch of internal medicine. The cloistered seclusion of the asylum has given place to the scientific activity of the clinic and the state hospital; and the psychiatrist is no longer only a custodian of the "insane" but is in active touch with medicine as a whole and is extending his attention to the many psychiatric problems of the outside world—"extramural psychiatry."

Upon the successful solution of these problems rests our chief hope for the future. So complicated are they, however, and so deep do their roots extend into the life of the people that without the aid of those in closest touch with this life our accomplishments in this direction must be limited.

Few persons have a closer acquaintance with the intimate affairs of the people than the general practitioner of medicine. Upon him must always rest the primary responsibility in the exercise of the healing art. He it is who sees disease in its incipency and who, if he is able to appreciate the true nature of the case, has the opportunity of applying appropriate treatment at a time when it can do most good. Especially is this the case in mental disorders, in which if the morbidity of certain symptoms is recognized before a definite disease picture is present the possibilities of prevention and cure are multiplied many fold.

Greatly to be regretted is the passing of the "family doctor," who from long and intimate acquaintance learned much about the physical and mental make-up and reactions of his patients and could apply this knowledge though he was a stranger to the psychological theories and their language of today.

PRESENT TREND OF THOUGHT IN PSYCHIATRY

Psychiatric thought, while not neglecting other factors, is now definitely turned toward the impor-

* Read before the Neuropsychiatry Section of the California Medical Association at the sixty-first annual session, Pasadena, May 2-5, 1932.

tance of the careful study of the mental and physical constitution of the individual and his reactions to influences both external and internal; it is endeavoring to get away from hard-and-fast systems of classification and to consider mental pictures as symptoms whose meaning is to be worked out and which are to be traced back to causes upon the modifiability of which depends the outlook as to both prevention and cure. In fact the distinction between physical and mental is artificial and unjustifiable scientifically, since they represent but different aspects of the same process.

In any event, as physicians we must consider the human organism as a whole and attempt to rectify any lack of proper coördination between its parts which we may discover, applying to this end all the resources of our art.

The idea that so-called "mental diseases" can properly be diagnosed and treated by persons other than educated and qualified physicians is entirely unacceptable and should be vigorously opposed by the medical profession. However, we should no more despise the aid of the psychologist and the social worker than we do that of the nurse and the technologist; on the contrary, we should welcome it, since within its proper limits and when rendered by those properly qualified it is indispensable if we are to carry out the ambitious program laid down for us. How far this program can be realized is not yet established. At least it presents courage and optimism in pleasing contrast to the pessimism which long dominated mental medicine.

The older of us can well remember the history of tuberculosis, about which from a period of hopelessness and pessimism we have passed into the light of a new era of courage and optimism. May we not hope for a similar denouement in the field of mental disorders?

SUGGESTIONS FOR MEDICAL CURRICULUM

How can we better arouse the necessary interest and understanding among our successors than by seeing that they receive more adequate and intelligent instruction in psychiatry than was given to our generation?

Although the medical course is already top-heavy and we must hesitate to add to its burden, it is my firm conviction that in it a knowledge of the principles of "medical psychology" should be imparted, and that clinical work in mental disorders should be required. The former could without much strain be introduced in connection with the physiology of the nervous system; the latter should stress the neuroses and minor psychoses, though the major psychoses should not be neglected, the idea being to teach the student how to differentiate between patients needing hospitalization and those who can be handled at home or in a clinic. If this part of the work is made attractive and its practical value is demonstrated, it will be followed up in the hospital years, and a supply of physicians willing to qualify as aids in extramural work will become available.

A certain amount of work in mental hygiene need not interfere seriously with general practice

and would increase the knowledge, broaden the views and heighten the prestige of those participating in it. At the start it would have to be chiefly a labor of love, but in time it would afford some pecuniary compensation.

MENTAL HYGIENE

The scope of this paper precludes any detailed discussion of mental hygiene, under the rubric of which extramural psychiatry finds its chief application. Its keynote is prevention. It is still surveying the field, but has already showed the value of the practical work which it has initiated, though its full possibilities are not yet determined.

It has, however, succeeded in attracting widespread popular interest in subjects formerly regarded with indifference, or even abhorrence; it has immensely improved the lot not only of the insane but also of the vast army of the inadequate and unfortunate, who, while they do not come under the above legal classification, are none the less in need of psychiatric study followed by intelligent and understanding treatment.

Such influence has the "mental hygiene movement" acquired that not only has the work of its national committee extended over our land and its influence about the world, but our states are establishing departments of mental hygiene through which the mental health of the community is to be looked after as the physical health has been for over a generation.

Truly, Clifford Beers may be considered as a benefactor of mankind. However, this new program has not failed to encounter opposition; and since it is a good business principle to stimulate a want for something before you attempt to sell it to the individual or the community, the public should be educated to the advantage of clinics and other mental hygiene work, through tactful addresses, demonstrations, and exhibits, before it is attempted to introduce them. A lack of tact in its introduction has handicapped the movement in some places, and the support of the right people should be assured before going ahead even with so useful a thing. "Do not oversell mental hygiene" is a warning which should be taken to heart, especially if the state or the community is to foot the bill.

Just as the general practitioner has had to act as an unpaid assistant in public health activities, he will also have to contribute something to the introduction of mental hygiene, which, though at present it is being carried on independently or under state hospital organization, will sooner or later have to establish a working connection with national, state, and local health departments.

PRACTICING PHYSICIANS AND PSYCHIATRY

The psychiatric needs of the undergraduate and hospital intern are in a fair way to be met; what can practicing physicians do to fit themselves for the psychiatric responsibility which they cannot much longer avoid?

The "doctor" has always been supposed to be a member of the "intelligentsia" and to their credit the majority of our brethren, from interest and

choice, have endeavored to qualify. How, then, can any physician be indifferent to the phenomena of the mind, a subject about which information is being eagerly sought by the general public? Inquire at the public library for simple books on medical subjects proper, and you find few or none. With books on psychology and psychopathology—real and pseudo—the shelves are crowded, the Freudian and allied doctrines preponderating.

Psychiatry has largely passed from under the domination of Kraepelin, so useful and fruitful in its day, and is calling for a more "dynamic" psychology. For the introduction and popularization of this we are indebted primarily to Freud. It should be easy for the physician who has had instruction in the physiology of the nervous system to acquire a modicum of knowledge of this subject from some of the many popular books, though better from the works on medical psychology which have appeared in the last decade, among which those of Kretschmer and of W. A. White may be mentioned. His practical experience should be obtained at the clinic and the institution for the insane, where opportunities for such experience are steadily increasing. Each such institution should be a center for the instruction of the physicians of the district and those associated with them in mental hygiene work.

In the psychiatric department of the Los Angeles General Hospital the medical students are given clinical instruction in psychiatry; the interns serve a six weeks' term, and in our outpatient department general practitioners are working. Should there be a demand for them, courses in psychiatry for general physicians could be easily established.

FREUDIAN INFLUENCES

Prevailing psychiatric thought does not restrict itself to one psychological dogma, but reserves the right to utilize any material which appears to have pragmatic value. Nevertheless, certain conceptions coming originally from Freud are pretty generally accepted as furnishing a working basis for the understanding of some of the mechanisms underlying the neuroses and—though less surely—the psychoses.

In psychiatry we have to deal with the emotional, or affective, side of the psyche much more than with the intellectual side. The former exerts a preponderant influence upon the mental mechanisms and especially in their disorders. While this conception has been developed by others also, we owe our first realization of its importance to the work of Freud; hence his ideas and definitions have come to occupy a most important position and should be familiar to all who occupy themselves with psychiatry. To the methods of diagnosis and treatment which Freud has developed he has given the name "psycho-analysis." Under this name his views have been popularized and books on the subject will be found classified under this heading in libraries.

Though the subject may also be approached from other directions, the Freudian conceptions have enormously influenced our ideas as to the

neuroses and the psychoses and have furnished a working method of practical value in diagnosis and treatment.

INFLUENCE OF EMOTIONS

The influence of the emotions, or affects, may lead to certain elements of the psychic content—experiences, conceptions, and ideas—being bound together, through the influence of a common emotional tone, in what is called a "complex." Such complexes remain as permanent units in the psychic dynamics; but should a complex contain material which is painful, abhorrent to the individual, or contrary to ethical standards, it is apt to be repressed, allowed to appear in consciousness in the form of symbols only, converted into physical symptoms, or transformed in other ways. In these processes Freud finds the groundwork of the neuroses, and his psycho-analysis has as its chief aim the finding and releasing of hidden complexes.

The transformation of the psychic content under the influence of the affective condition (katathymia) plays a most important part in the psychoses and determines their symptoms to a much greater extent than does the intellectual factor.

The physician should always remember that affect-accentuated complexes play an important part throughout all medicine and may ever be masquerading under the guise of symptoms apparently physical.

KRETSCHMER'S VIEWS

Kretschmer's views, developed along the line of psychobiology, better harmonize with prevailing medical training and he speaks in a language more familiar than is that of psychoanalysis. Nevertheless, freely utilizing the psychic mechanisms postulated by Freud, he gives due credit to the really great and original contributions of this author.

Kretschmer is particularly identified with the idea that there is a close correlation between body build, temperament, and character, which is probably effected through "endocrine-humoral" influences in connection with the vegetative nervous system. Upon this basis he divides individuals according to temperament into "cyclothymic" and "schizothymic." The manic-depressive psychoses are pathological aberrations of the normal cyclic type, while dementia præcox (or schizophrenia) is a caricature-like perversion of the normal schizic traits.

The manic-depressive psychosis is more apt to occur in persons of robust but not athletic figure, the "pyknic" type of Kretschmer; dementia præcox, in mixed types, among which the asthenic and the athletic build is predominant.

HOW THE GENERAL PHYSICIAN MAY AID

The general physician should prepare himself to recognize and treat the neuroses and psycho-neuroses which he will find affecting to a greater or less extent a large proportion of his patients and should act as friend and counselor to the great army of constitutional psychopaths, using his in-

fluence to control and reëducate them and to keep them out of trouble as far as possible. By early recognition and judicious handling he may be able to cut short the periods of a certain number of the cases of curable psychoses and keep some of them out of institutions, and may also keep some of the less favorable types at home for long periods; but the majority of both these classes will probably have to be committed sooner or later on account of dangerous traits or for other social or economic reasons. He may be able to care for a good many senile demented, whom it is always distressing to have to remove from home, but many of these become impossible in a family and to their neighbors. As a general proposition the state hospital or a licensed private institution is the safest and best place for the actively insane.

Physicians should always be on the lookout for danger signs in mental patients and prompt to take steps to have them committed when these occur.

To all who have had much institution experience the desirability of developing some way in which more of the chronic patients can be handled outside is apparent. This is recognized in the parole system developed in different degrees in different parts of the United States; but it does not seem to have reached the stage of efficiency which it has attained in European countries, notably in Germany. There a system of placing patients considered as safe, in private homes, usually in a rural section and under the care of persons formerly asylum attendants, is reported as working well. The general physician who has had some psychiatric experience could exercise the necessary medical supervision over these cases though the rules governing their care should emanate from the state department or the hospital of the district.

PSYCHOTHERAPEUTIC PROCEDURES

In neuroses and psychoses, psychotherapy of some sort plays a most important rôle. No more may be needed than the psychic influence exerted, consciously or unconsciously, by all skilled physicians. Many cases, however, will tax all their resources.

Psychotherapeutic procedures have never been lacking, but today psycho-analysis enjoys the widest reputation, both as a therapeutic and as an educational method. While its usefulness cannot be denied, even its most ardent advocates do not recommend it as a procedure of universal application. The acquirement of its technique requires a long apprenticeship and special qualities upon the part of those who would practice it, the first requirement being that they should be themselves psycho-analyzed and made aware of their own complexes.

In its application it is time-consuming and expensive, requiring from six months to a year or more to secure results. It is, hence, unsuited to the pockets of the majority of patients. In quite a number of persons its procedures are inapplicable, and it is capable of doing much harm if ineptly applied, especially on account of the strong sexual emphasis which it contains.

Kretschmer remarks, "Psycho-analysis is like surgery, dangerous and irresponsible if practiced only occasionally and without adequate training." It is not a method to be used by the general practitioner. Even skilled neuropsychiatrists prefer to turn their analytic work over to a proved expert.

However, any intelligent physician can add an atmosphere of favorable suggestion to his treatment and can supervise courses of exercise, re-education, and occupational therapy.

The term "insanity" is legal, not medical, is unsatisfactory scientifically, has unpopular connotations, and we would fain be rid of it; but it is so firmly entrenched behind the law that we have so far been unable to oust it from our vocabulary.

LEGAL FACTORS

All physicians should know something about the laws regulating the determination of insanity and mental incompetence and the commitment of the insane to institutions. These laws differ in different states. Information concerning this matter is to be found in the publications of the Committee for Mental Hygiene and in the public documents of the United States and of the different states.

The laws of California are behind the times in this matter and scientifically unsatisfactory. For years some of us have been working to secure such modifications of them as will simplify getting patients into institutions, will soften theasperities of our present procedures, and will build up a modern department for the study and care of mental disease; but we were unable to accomplish anything until at the last session of the legislature, when, through the efforts of our efficient President Harris and others, a small wedge was introduced into the present structure.

If all our colleagues in California will lend their aid in this work, the necessary reforms can eventually be effected, to the benefit of a large class of unfortunates and to the enhancement of the scientific reputation of our fair state.

214 South Lafayette Park Place.

DISCUSSION

H. G. MEHRTENS, M. D. (Stanford Hospital, San Francisco).—Doctor Allen has given us a splendid summary of the relation of psychiatry to the general practitioner. His stressing of the biologic and physiologic approach is particularly timely, as many physicians trained along the lines of the physical sciences have great difficulty in accepting what they consider to be the metaphysic trends in psychiatry.

Our clinical attitude should be broad enough to include the helpful in every new contribution, no matter in what province it may originate. The new psychobiologic leads of Kretschmer, Ewald, Stark, and Hoffman, along with investigators of the relationship of constitution to personality, all tend to bring psychiatry closer to internal medicine.

Again, Doctor Allen's emphasis of the place of the general practitioner in psychiatry and mental hygiene appealed to me strongly. Until such time as every medical student receives the same opportunity to study the psychiatric aspect of his patients at first hand, as he does the organic pathology, just so long will incipient mental upsets of the patients pass unrecognized. Fortunately medical schools, teaching hospitals, and even general hospitals, are becoming increasingly

alive to the importance of the situation. We are indebted to Doctor Allen for so clearly presenting this many-sided subject.

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EDWARD W. TWITCHELL, M. D. (909 Hyde Street, San Francisco).—The "family doctor," whose disappearance it is customary to deplore, unwittingly practiced psychiatry all of his life. The more psychiatrically he looked at things the better family doctor he was. The space he left had to be filled in some way.

Since psychology in later years became a household word, and particularly under the widespread influence of Freud and Freudians, many laymen have taken up psychotherapy. In general, I think this has been a mistake and the mistake is one which has been aided by the neglectful attitude of physicians. The repugnance of many internists to anything having to do with the mental side of medicine had as a consequence the treatment of these mental things by laymen, just as the neglect of physiotherapy has been such a boon to the chiropractors.

Psychiatry in the medical school is gaining headway, but it is very difficult to find room or time in our crowded curricula. If the student can be sent out with the proper attitude toward psychiatry, much will be gained. Refinements and details must be learned after graduation, but the student should enter on his career properly prepared for subsequent improvement.

Freudian influences which once dominated everything are now apparently on the wane, and while the really eminent achievements of Freud must not be denied, one need not condone the nonsense so freely admixed. Strictly Freudian psycho-analysis by an ordained and certified analyst is a formidable thing which I do not believe the psychiatry of the future is going to find at all necessary.

Mental hygiene is an experiment noble in purpose, but I feel it is promising much more than it can perform.

The California law governing the insane needs radical reform. The progressive eastern states long ago abolished the barbarous treatment still given the homeless and friendless insane in many of our smaller counties in California. This disgraceful situation which has lasted so many years should be ended by the forthcoming legislature.

✽

SYDNEY KINNEAR SMITH, M. D. (230 Grand Avenue, Oakland).—Doctor Allen's survey of psychiatry as related to the general practitioner of medicine is very much to the point and is the sort of discussion that is sorely needed at the present time. Psychiatry has become more popular with the nonmedical mental hygienist than with the medical profession. Psychiatry, unfortunately, is almost a phobia to the general practitioner. If the general practitioner is to really be a "general" practitioner, he must grasp as much in one specialty as in another, and to the present time such an attitude has not been apparent. There are several ways in which this difficulty may be rectified:

1. An attempt on the part of psychiatric specialists to work more completely in association with the practitioner of general medicine and to make themselves more a part of the general practice of medicine rather than the high priests of a special cult.

2. The dissemination of the usable facts of mental hygiene to the public and to the medical profession, as through the medium of the psychopathic hospital, the psychopathic department of the general hospital, participation of the psychiatric profession in medical society meetings, ward rounds, and lectures to the laity.

3. Adequate teaching in our medical schools which should include:

- (a) Full time psychiatric instruction.

- (b) A closer tie-up between psychiatry and the other branches of clinical medicine.

- (c) A reasonable chance for medical students to contact psychotic and psychoneurotic patients in clinics, psychopathic hospitals, and in state hospitals.

- (d) Internships which include a psychiatric service.

- (e) An improved attitude on the part of many of our clinical instructors in other branches of medicine toward psychiatric problems. Their present lack of interest, and even of animosity, probably arises in their own ignorance of the subject with a resultant feeling of inferiority that is compensated for by a disdain for anything that savors of the psychiatric.

Probably the effort to incorporate the principles of psychiatry into the equipment of the general practitioner has been worked out most successfully at the Harvard Medical School and at the University of Colorado. It will well behoove us, in our interest in turning out well-balanced physicians in our own California medical schools, to study the systems of instruction devised by these other more enlightened schools.

There is not a full-time professor of psychiatry in any medical school in California, nor is there a well-worked-out, systematic plan of teaching. In contrast to this statement, we may point out that there are twice as many patients in hospitals for mental disease in the United States as there are in beds for all other disorders combined.

How are we going to meet this problem if we do not train our medical students to at least recognize the signs of mental disorder? And may we go a step further in asking how we are going to accomplish this if we do not train the next generation of medical school instructors?

It is probably too much to ask that the present generation of instructors have an intelligent, or even a sympathetic attitude toward psychiatry.

SOME MEDICAL PROFESSION STATISTICS*

FACTS REVEALED BY THE 1930 UNITED STATES CENSUS

By EDWIN BATES
San Francisco

THE Pacific Coast has more physicians, surgeons, and dentists, in proportion to its population, than any other geographic area of the country, according to statistics based on the census of 1930 and recently released by the Bureau of the Census. In number of trained nurses, in relation to the population, the Coast states stand second, being exceeded only by New England.

The occupation statistics of the 1930 census reveal in very impressive fashion the dynamic changes in employment which took place between 1920 and 1930. This decade, which witnessed the broad expansion of our automotive age and contributed the radio, television, electric refrigeration and many other scientific achievements, also brought a very rapid change in our entire employment structure. Many of these changes can now be measured with the accuracy of official data through a study of the census reports.

PROFESSIONAL GROUPS SHOW RAPID EXPANSION

Between 1920 and 1930 the number of persons employed in *Professional Service*, as defined by the Bureau of the Census, increased from

* From the U. S. Bureau of Foreign and Domestic Commerce, San Francisco.

* A companion paper to this discussion of medical statistics on the Pacific Slope as taken from the United States Census reports, and dealing with the dental profession of the same region, will be printed in the February number of the Pacific Dental Gazette.

TABLE 1.—Number of Physicians and Surgeons Per One Hundred Thousand of Population as Compared with Per Capita Retail Sales in the Nine Geographic Areas of the United States

Geographic Division	Number of Physicians and Surgeons Per 100,000 of Population	Rank of Area in Number of Physicians and Surgeons Per 100,000 of Population	Per Capita Retail Sales (1929)	Rank of Area in Per Capita Sales
New England	135	3	\$463.31	3
Middle Atlantic	141	2	500.01	2
East North Central	128	4	452.28	4
West North Central	127	5	408.46	6
South Atlantic	106	8	268.60	8
East South Central	97	9	220.51	9
West South Central	107	7	307.92	7
Mountain	117	6	424.72	5
Pacific	160	1	549.53	1
United States Average	125		\$407.52	

Source: Bureau of the Census. Figures for physicians and surgeons from 1930 Census of Population; retail trade figures are for the year 1929.

2,171,251 to 3,253,884 or a gain of 50 per cent. From a percentage standpoint this class of occupations increased with considerably greater rapidity than the general increase in total number of gainfully employed persons, which rose by 17.3 per cent in the decade.

The medical profession, with its advancing standards for admission, has not, however, followed the general trend of the professional group. In the 1920-30 decade the number of physicians and surgeons in the United States increased from 144,977 to 153,803 or a gain of approximately 6 per cent, while the population increased by 16 per cent. The census figures also disclose that the number of physicians and surgeons reported in the 1930 census is only a little over one per cent larger than in 1910. In explanation of the policy of the Census Bureau in reporting persons classified as physicians and surgeons, the following extract is quoted from a letter from the chief statistician for population:

“The Fifteenth Census enumerators were specifically instructed that persons who on account of old age, permanent invalidism, or other reasons were no longer following any occupation should be returned as having no occupation. Further, they were instructed to return such persons as having no occupation if they worked only occasionally or only a short time each day. Notwithstanding these instructions, it is quite probable that the published figures include some retired persons. Men, such as physicians, who have followed a profession for many years, probably are especially inclined to claim that profession after actual retirement.

“Census figures relating to physicians and surgeons include internes in hospitals and physicians and surgeons in the military and naval service. These figures include all physicians and surgeons who usually practice, although they may not have been employed when the census was taken.”

In contrast to the gain of 6 per cent in physicians and surgeons within the 1920-30 decade, the number of dentists increased by nearly 27 per cent, and trained nurses by 97 per cent. In the same period the legal profession showed an expansion of 31 per cent; architects, 21 per cent; chemists, assayers, and metallurgists, 43 per cent; technical engineers, over 66 per cent; and college presidents and professors, 85 per cent.

NUMBER OF PHYSICIANS AND SURGEONS CORRELATES CLOSELY WITH PURCHASING POWER OF POPULATION

In 1930, when the population census was being conducted, a special census was also being made of retail trade. From this retail census we now have figures showing per capita retail sales in every state and city of the country. These facts, supplying as they do an index to wealth standards of the people of the United States, offer an opportunity for determining just how the number of physicians and surgeons in the population of a state or geographic area compares with the buying power as measured by per capita retail sales. The correlation between these two factors is shown in Table 1, which indicates the per capita retail sales in 1929 and the number of physicians and surgeons per 100,000 of population in the nine geographic areas of the country.

The close correlation between the ratio of physicians and surgeons to population and the per capita retail sales, as indicated by the above table, is very striking. The census figures do not disclose the amount spent for medical care by the people of the several geographic areas of the country, although the figures given above would certainly tend to substantiate the generally accepted belief that there is a close relationship between the expenditure for medical service and the amount of money spent over the retail counter. Furthermore, it appears that through the normal working of economic forces the number of physicians and surgeons in the several geographic areas of the country has become adjusted with a close degree of precision to the ability of the people to buy those services. With individual states and cities this relationship, as we might expect, is not so closely maintained, although the correlation in many ways is relatively pronounced. Looking at the matter from the standpoint of individual states, we find there are fifteen states which exceed the national average of 125 physicians and surgeons per 100,000 of population. Of these fifteen states, thirteen also exceed the national average in per capita retail sales.

TABLE 2.—Population, Number of Physicians and Surgeons, and Number of Physicians and Surgeons Per One Hundred Thousand of Population, by States and Geographic Areas					
New England States					
State	Population	Physicians and Surgeons			Number Per 100,000 of Population
		Male	Female	Total	
Maine	797,423	910	33	943	118
New Hampshire	465,293	508	36	544	117
Vermont	359,611	450	22	472	131
Massachusetts	4,249,614	5,850	426	6,276	148
Rhode Island	687,497	750	31	781	114
Connecticut	1,606,903	1,932	82	2,014	125
TOTAL	8,166,341	10,400	630	11,030	135
Middle Atlantic States					
New York	12,588,066	19,010	1,085	20,095	160
New Jersey	4,041,334	4,368	200	4,568	113
Pennsylvania	9,631,350	11,633	616	12,249	127
TOTAL	26,260,750	35,011	1,901	36,912	141
East North Central States					
Ohio	6,646,697	8,045	360	8,405	126
Indiana	3,238,503	3,908	151	4,059	125
Illinois	7,630,654	10,669	701	11,370	149
Michigan	4,842,325	5,268	206	5,474	113
Wisconsin	2,939,006	2,921	93	3,014	103
TOTAL	25,297,185	30,811	1,511	32,322	128
West North Central States					
Minnesota	2,563,953	3,043	166	3,209	125
Iowa	2,470,939	2,995	120	3,115	126
Missouri	3,629,367	5,338	169	5,507	152
North Dakota	680,845	494	14	508	75
South Dakota	692,849	581	18	599	86
Nebraska	1,377,963	1,713	70	1,783	129
Kansas	1,880,999	2,111	74	2,185	116
TOTAL	13,296,915	16,275	631	16,906	127
South Atlantic States					
Delaware	238,380	279	8	287	120
Maryland	1,631,526	2,394	100	2,494	153
District of Columbia	486,869	1,343	107	1,450	298
Virginia	2,421,851	2,390	41	2,431	100
West Virginia	1,729,205	1,727	39	1,766	102
North Carolina	3,170,276	2,288	38	2,326	73
South Carolina	1,738,765	1,243	23	1,266	73
Georgia	2,908,506	2,796	43	2,839	98
Florida	1,468,211	1,765	45	1,810	123
TOTAL	15,793,589	16,225	444	16,669	106
East South Central States					
Kentucky	2,614,589	2,788	60	2,848	109
Tennessee	2,616,556	2,975	50	3,025	116
Alabama	2,646,248	2,150	12	2,162	82
Mississippi	2,009,821	1,507	20	1,527	76
TOTAL	9,887,214	9,420	142	9,562	97
West South Central States					
Arkansas	1,854,482	2,006	29	2,035	110
Louisiana	2,101,593	1,982	48	2,030	97
Oklahoma	2,396,040	2,474	71	2,545	106
Texas	5,824,715	6,218	179	6,397	110
TOTAL	12,176,830	12,680	327	13,007	107
Mountain States					
Montana	537,606	485	14	499	93
Idaho	445,032	375	8	383	86
Wyoming	225,565	213	9	222	98
Colorado	1,035,791	1,610	92	1,702	164
New Mexico	423,317	369	11	380	90
Arizona	435,573	472	8	480	110
Utah	507,847	491	16	507	100
Nevada	91,058	141	4	145	159
TOTAL	3,701,789	4,156	162	4,318	117
Pacific Coast States					
Washington	1,563,396	1,877	109	1,986	127
Oregon	953,786	1,233	93	1,326	139
California	5,677,251	8,890	875	9,765	172
TOTAL	8,194,433	12,000	1,077	13,077	160

Table 2 shows the populations of the several states arranged by geographic areas of the country with the number of physicians and surgeons as shown by the 1930 census and the number of physicians and surgeons per 100,000 of population.

SUMMARY

The preceding tables reveal that the number of physicians and surgeons in the population of the several states ranges between 172 per 100,000 persons in California to 73 per 100,000 in North Carolina and South Carolina. In fifteen states, as previously indicated, the number of physicians exceeds the national average of 125 per 100,000. Table 3 shows these facts.

PHYSICIANS AND SURGEONS IN PACIFIC COAST CITIES

The census reports show the number of physicians and surgeons for all cities of 25,000 or more population. On the Pacific Coast there are

TABLE 3.—Fifteen States in which Number of Physicians Exceeds National Average of 125 per 100,000 of Population

State	Number of Physicians and Surgeons Per 100,000 of Population
California	172
Colorado	164
New York	160
Nevada	159
Maryland	153
Missouri	152
Illinois	149
Massachusetts	148
Oregon	139
Vermont	131
Nebraska	129
Pennsylvania	127
Washington	127
Iowa	126
Ohio	126

nine cities having more than 100,000 population, and eighteen cities of between 25,000 and 100,000.

TABLE 4.—Population, Number of Physicians and Surgeons, and Number of Physicians and Surgeons Per One Hundred Thousand of Population for Cities of Twenty-Five Thousand Population and Over in the Pacific Coast States in 1930

California					
City	Population	Physicians and Surgeons			Number Per 100,000 of Population
		Male	Female	Total	
Long Beach	142,032	255	24	279	196
Los Angeles	1,238,048	2,526	264	2,790	225
Oakland	284,063	382	49	431	152
San Diego	147,995	311	19	330	223
San Francisco	634,394	1,479	215	1,694	267
Alameda	35,033	48	6	54	154
Alhambra	29,472	36	10	46	156
Bakersfield	26,015	27	1	28	108
Belvedere Township	33,023	9	3	12	36
Berkeley	82,109	127	20	147	179
Fresno	52,513	98	3	101	192
Glendale	62,736	166	16	182	290
Pasadena	76,086	198	16	214	281
Riverside	29,696	38	1	39	131
Sacramento	93,750	143	9	152	162
San Bernardino	37,481	51	4	55	147
San Jose	57,651	84	11	95	165
Santa Ana	30,322	48	6	54	178
Santa Barbara	33,613	62	5	67	199
Santa Monica	37,146	90	7	97	261
Stockton	47,963	65	5	70	146
Total	3,211,141	6,243	694	6,937	216
Washington					
Seattle	365,583	663	50	713	195
Spokane	115,514	210	19	229	198
Tacoma	106,817	163	4	167	156
Bellingham	30,823	49	3	52	169
Everett	30,567	41	1	42	137
TOTAL	649,304	1,126	77	1,203	185
Oregon					
Portland	301,815	630	60	690	229
Salem	26,266	53	5	58	221
TOTAL	328,081	683	65	748	228
TOTAL ALL CITIES	4,188,526	8,052	836	8,888	212

TABLE 5.—Physicians and Surgeons in Cities of Twenty-Five Thousand or More Population in the Mountain States, 1930

City	Population	Physicians and Surgeons	Physicians and Surgeons Per 100,000 of Population
ARIZONA:			
Phoenix	48,118	96	200
Tucson	32,506	71	218
COLORADO:			
Colorado Springs ...	33,237	88	265
Denver	287,861	811	282
Pueblo	50,096	81	162
MONTANA:			
Butte	39,532	63	159
Great Falls	28,822	48	167
NEW MEXICO:			
Albuquerque	26,570	77	290
UTAH:			
Ogden	40,272	53	132
Salt Lake City	140,267	242	173

In addition, Belvedere Township, in Los Angeles County, is considered an urban area under a special rule adopted for the 1930 census.

Of the nine Coast cities of more than 100,000 population San Francisco, with 267 physicians and surgeons per 100,000 of population, stands highest, while Oakland, with 152 per 100,000, is lowest. Taking the cities of the San Francisco Bay area as a single metropolitan district, we find an interesting coincidence in figures. The combined populations of San Francisco, Oakland, Alameda, and Berkeley amount to 1,035,599. The census figures show 2,326 physicians and surgeons in these cities which, in relation to the total population, gives a ratio of 225 physicians and surgeons per 100,000 persons or exactly the same figure as shown for the city of Los Angeles. Portland, with 229 physicians and surgeons per 100,000, is the only large Pacific Coast city showing a higher ratio than Los Angeles and the San Francisco metropolitan area.

Table 4 shows the number of physicians and surgeons in Pacific Coast cities with the ratio per 100,000 of population.

PHYSICIANS AND SURGEONS IN CITIES OF THE MOUNTAIN STATES

There are ten cities in the Mountain States of more than 25,000 population. Two of these—Denver and Salt Lake City—exceed 100,000 population.

In a number of cities of the Mountain States the number of physicians and surgeons is high, in proportion to the population, on account of the relatively large number of health seekers found in those cities; thus, Denver shows 282 physicians and surgeons per 100,000 of population; Colorado Springs, 265; and Albuquerque, 290.

Table 5 shows the number of physicians and surgeons in the ten cities of 25,000 and more population in the year 1930.

Bureau of Foreign and Domestic Commerce
311 Customs House.

REFERENCE

Bureau of the Census. Census of Population, 1930.

CALIFORNIA CHIROPRACTIC AS A LAWYER SEES IT*

By WILLIAM C. WOODWARD, M. D., LL. M.
Chicago, Illinois

SCHUSTER, a licensed chiropractor in the State of California, was convicted in the municipal court, city of Los Angeles, of violating the Medical Practice Act. He appealed to the Appellate Department, Superior Court, Los Angeles County. There the judgment of the municipal court was reversed and the case remanded for a new trial. In remanding the case, the Superior Court said:

"The charge is under the Medical Practice Act only. It is stipulated that defendant was a licensed chiropractor. Hence, he could establish a defense by showing that the treatments he offered to give were a part of the practice of chiropractic. The criterion established by the Chiropractic Act in this matter, except as to the use of medicine and other acts expressly excluded from the scope of chiropractic, is the teaching in chiropractic schools and colleges. Section 7. It was therefore error to reject defendant's offer to prove that the treatments offered by him were taught in chiropractic schools and colleges as a part of chiropractic." *People vs. Schuster*, 10 P. (2d) 204, decided March 25, 1932.

In view of the court's conclusion, it would be interesting to know what the evidence was that Schuster proffered. Did he offer evidence of what was taught when the initiative Chiropractic Act was adopted or evidence of what was taught when the alleged offense was committed? How many alleged chiropractic curriculums did he proffer in evidence? How did he offer to prove that the schools whose curriculums were proffered actually taught the branches included in the printed curriculums? The California Chiropractic Act, adopted in 1922 by the electors of the state, provides:

"Section 7. *Certificate to Practice.* One form of certificate shall be issued by the board of chiropractic examiners, which said certificate shall be designated 'License to practice chiropractic,' which license shall authorize the holder thereof to practice chiropractic in the state of California as taught in chiropractic schools or colleges; and, also, to use all necessary mechanical, and hygienic and sanitary measures incident to the care of the body, but shall not authorize the practice of medicine, surgery, osteopathy, dentistry or optometry, nor the use of any drug or medicine now or hereafter included in *materia medica.*" *Deering's General Laws of California*, 1931, Volume Two, 4811, Section 7.

This language may be construed either (1) as an attempted definition of "chiropractic" by reference to the curriculums of chiropractic schools and colleges when the Act was adopted, or (2) an avoidance of definitions, coupled with an attempt to vest in chiropractic schools and colleges the right to fix the California limits of chiropractic practice.

ATTEMPTED ADOPTION OF CHIROPRACTIC CURRICULUMS

If the Chiropractic Act of California is construed as attempting to adopt as legal standards whatever was taught as chiropractic in chiropractic schools and colleges when the Act was adopted, the Act is probably void for uncertainty, for it is an elementary rule of statutory construc-

* From the Bureau of Legislation, of the American Medical Association.

tion that a law that establishes a crime must define that crime clearly enough to enable those who must live under the law to determine what they may and may not lawfully do. Under this rule of construction, the California Chiropractic Act clearly fails. It does not define chiropractic. It does not determine the number of schools that must teach any given branch of the healing art before it becomes a lawful part of chiropractic. It does not establish any agency for determining from time to time what chiropractic schools do teach, and promulgating its findings for the guidance of the courts and administrative officers of the state and for the guidance of the people. It does nothing more than refer the seeker of information concerning the law to the curriculums of an undetermined number of undesignated schools and colleges throughout the world that, on the day when the Act became effective, were teaching an undefined something, referred to in the Act as "chiropractic." Certainly the rule of conduct laid down by the Act is too uncertain and indefinite to justify the state in imposing fines and imprisonments for violations of it.

What Is a Chiropractic School or College.—Since the enforcement of the Act turns on the teaching of chiropractic by chiropractic schools and colleges, it becomes important to determine just what a chiropractic school or college is. So far as the Act shows, a school or a college is a place or institution where somebody systematically teaches someone else something. A chiropractic school or college is, then, a place where somebody teaches someone else "chiropractic." But what is "chiropractic"? Since a license to practice chiropractic permits a licentiate to practice whatever a chiropractic school or college teaches, it is evident that within the meaning of the California law, chiropractic is what a chiropractic school teaches. A chiropractic school or college, then, is a place or institution where somebody teaches someone else that which is taught in a chiropractic school or college. With this delightfully clear understanding of what a chiropractic school or college is, we may proceed to inquire into the apparent attempt by the electors of California to adopt as a part of the initiative Chiropractic Act the teachings of the chiropractic schools and colleges of the world when the Act was adopted.

What Did Chiropractic Schools and Colleges Teach When the California Chiropractic Act Was Adopted in 1922?—It would have been difficult even at the time when the California Chiropractic Act was passed, to prove legally the scope of practice authorized by the Act. It is not unlikely that it was because of that very difficulty that the chiropractic proponents of the Act refrained from incorporating in it a definition of chiropractic. If, however, it was difficult to prove the scope of the practice of chiropractic in 1922, it has become and is becoming increasingly difficult to prove the scope of such practice at that time. No one, not even the Board of Chiropractic Examiners, has authority to determine officially beforehand whether any given method of diag-

nosis and treatment is permissible under a chiropractic license. The question is one that must be settled in every case, on evidence adduced in court by the parties. Every licensed chiropractor who employs any method of diagnosis and treatment does so at his peril. The only way by which he can establish the legality of any questionable procedure is to adopt it in his practice, bring about his own arrest and prosecution, and then let the courts of criminal jurisdiction and the appellate courts pass on the matter. After all has been said and done, it is not impossible that between the time of his arrest and the time of final action by the courts, the curriculums of chiropractic schools may have been changed, so that a method that was legal at the time of his arrest has since become illegal or *vice versa*, because of changed chiropractic curriculums. Obviously, a law that undertakes to create a crime of so hazy and intangible a character as this is void for indefiniteness.

DELEGATION OF LEGISLATIVE AUTHORITY TO CHIROPRACTIC SCHOOLS AND COLLEGES

It seems probable, however, that it was the intent of the electors of California, when they adopted the Chiropractic Act of 1922, to adopt by reference, as a part of the Act, the curriculums of the chiropractic schools and colleges of the world at that time. It seems rather to have been their intention to vest in those schools, and in all similar schools that might thereafter at any time and place come into existence, the right to change at will, from time to time, by the simple expedient of changing their curriculums, the legal scope of chiropractic in California.

This forward-looking purpose of the Act may be inferred from the prohibition in Section 7, on the use by licensed chiropractors of drugs and medicines "now or hereafter" included in *materia medica*. This is clearly an attempt to vest in some undefined agency, or to recognize as already vested in some unnamed agency, authority to include drugs and medicines in "*materia medica*," and so to prevent chiropractors from using them or by excluding drugs and medicines from "*materia medica*," to enable chiropractors to use the excluded articles. Because of this attempted or assumed delegation of authority to some unnamed agency or agencies to determine from time to time *in the future* what drugs chiropractors may use, and what drugs they may not use, it may be assumed that the Act was intended to vest in chiropractic schools and colleges the right to change from time to time *in the future* the scope of chiropractic practice in California by changing the curriculums of such schools. This assumption is strengthened by the fact that the Act contains no definite standard of chiropractic practice; for if the proponents of the Act had known of any definite standard when the Act was proposed, they doubtless would have incorporated it into the Act.

Probably, in any event, an attempt to lay down such a vague and fluctuating rule of conduct as is here proposed, by granting to an indefinite number of unnamed chiropractic schools and colleges the right to vary the legal standards of the act from

day to day would be void for uncertainty, especially in the absence of any provision by which some public authority would determine, declare, and officially publish from time to time statements of the conditions of chiropractic curriculums then existing.

If the electors of California attempted, through the initiative Chiropractic Act of 1922, to delegate to chiropractic schools and colleges the right to determine from time to time the scope of the practice of chiropractic in California, two interesting questions arise, in addition to the questions already discussed:

1. Can the electors of California, under the Constitution, delegate to any agency other than the legislature authority to determine from time to time what acts and omissions shall constitute a crime under the laws of the state?

2. If the electors of California can delegate such authority, was the attempted delegation in the present instance lawfully consummated?

Attempted Delegation of Legislative Authority Void Because Unconstitutional.—The Constitution of the State of California provides:

"Section 1. The legislative power of this state shall be vested in a Senate and Assembly which shall be designated 'The Legislature of the State of California,' but the people reserve to themselves the power to propose laws and amendments to the Constitution, and to adopt or reject the same, at the polls independent of the legislature, and also reserve the power, at their own option, to so adopt or reject any act, or section or part of any act, passed by the legislature. . . ." *Constitution of California*, Article IV, Section 1.

The method by which the Constitution may be amended is stated in the Constitution, but it is unnecessary to refer to it further here.

Under the provisions of the Constitution set forth above, two agencies, and only two, are vested with legislative power, the people and the legislature, and it is a well settled rule of law that legislative power may not be constitutionally delegated. *Field vs. Clark*, 143 U. S. 649; *United States vs. Grimaud*, 220 U. S. 506; *Buttfield vs. Stranahan*, 192 U. S. 470; *Craig vs. O'Rear* (Ky.), 251 S. W. 828. It has become increasingly common, however, to tolerate the delegation to administrative boards and officers of certain limited quasi-legislative power. The question arises, then, whether the electors of California, acting under the initiative and referendum provisions of the Constitution and without amending the Constitution itself, can delegate legislative authority to any agency other than the legislature; in the present case, whether the electors may lawfully delegate to the chiropractic schools and colleges of the world the right to fix the lawful scope of chiropractic practice in the State of California.

Probably the electors exhaust the legislative authority reserved to them in the Constitution, when they adopt an initiative and referendum act. If through such acts the electors could delegate legislative authority to other groups, in derogation of the legislative authority vested by the Constitution in the legislature, the legislature might

soon be reduced to a nonentity. The electors may exercise a very broad legislative authority, but they can hardly go so far as to hamstring the legislature by authority delegated under an initiative measure. If the authority of the legislature is to be curtailed, it must be done by the initiative measure itself or by amendments to the Constitution.

Even if the electors of California have the right, without amending the Constitution, to delegate legislative authority to subordinate bodies, such as chiropractic schools and colleges, in derogation of the legislative authority of the legislature, their attempted delegation of such authority in the present instance would seem to be void. The attempted delegation of legislative authority through the Chiropractic Act of 1922 must be distinguished from a delegation of authority by the legislature in An Act for the Regulation of the Practice of Medicine and Surgery in the State of California and for the appointment of a board of medical examiners in the matter of said regulation, approved February 27, 1901 (Stats. 1901, ch. 51). In delegating quasi-legislative authority under the Medical Practice Act, the legislature did not undertake to delegate authority to determine what should and what should not constitute a crime. It provided only an administrative rule, namely, that an applicant for a license to practice medicine and surgery "must produce . . . a diploma issued by some legally chartered medical school, the requirements of which medical school shall have been, at the time of granting such diploma, in no particular less than those prescribed by the Association of American Medical Colleges for that year." This limitation related to the fitness of medical schools and no criminal accountability attached to such school or to any of its graduates for noncompliance. In 1904, the Supreme Court of California held this legislation constitutional because "the legislature cannot successfully prescribe in advance a standard to meet these new and changing conditions," saying:

"The law is as fixed, definite, and certain in this respect as the nature of the subject and the object to be attained will permit; and we do not think it should be held void because it adopts the standard fixed from time to time by those who, it will be presumed, are the most eminent in the profession which it attempts to regulate, and who should be the most interested in maintaining the highest degree of professional proficiency, skill, and training." *Ex Parte Gerino*, 148 Cal. 590, 84 Pac. 39, 3 L. R. A. 896.

This opinion was reaffirmed, in 1907, in *Arwine vs. Board of Medical Examiners*, 151 Cal. 499, 91 Pac. 319. Obviously, however, the reasons for these decisions do not apply in the present instance, for it is easily possible for a state to define and limit the scope of chiropractic practice. Many states have done and are doing so.

The opinion of the Supreme Court of California, with reference to the delegation of legislative authority to define what shall constitute a crime, is stated in *Ex Parte Cox*, 63 Cal. 21, decided in 1883, when the court said:

"The legislature had not authority to confer upon the officer or board the power of declaring what acts

should constitute a misdemeanor. The legislative power of the state is vested in the Senate and Assembly (Constitution, Article IV, Section 1). That power could not, as to the case before us, be delegated to the officer or board. The act before us does not say it shall be unlawful to import, distribute or dispose of infected articles, but it attempts to confer on the officer or board the power to so declare." *Ex parte Cox*, 63 Cal. 21.

In that case, a *habeas corpus* proceeding, the petitioner had been convicted of a misdemeanor, because of a violation of a regulation of the Board of State Viticultural Commissioners, made under authority of an act authorizing the board to declare and enforce regulations in the nature of quarantine regulations to govern the importation of infected vines and providing that a violation of those regulations should be a misdemeanor.

To a similar effect is the decision of the Supreme Court of California, in 1906, in *Hewitt vs. Board of Medical Examiners*, 148 Cal. 590, 84 Pac. 39. In that case a license to practice medicine had been revoked under authority of a statute that authorized revocation of a license if a licentiate was shown to have been guilty of "advertising of medical business in which grossly improbable statements are made." The court said:

"It is an easy matter for the legislature to declare what statements in the advertisement of medical business shall be deemed 'grossly improbable,' and it must do so, and not leave it to a board of medical examiners after the publication is made to determine, in its judgment, whether the statements were or were not 'grossly improbable,' and according to its particular view of the matter, revoke or refuse to revoke the license. The right to practice medicine cannot be made to depend upon such a vague, uncertain, and indefinite provision." *Hewitt vs. Board of Medical Examiners*, 148 Cal. 590, 84 Pac. 39.

The general rule with respect to the delegation of legislative authority was clearly stated by the Supreme Court of Washington, in 1916, in *State vs. Bonham*, 93 Wash. Rep. 489, 161 Pac. 377. The case involved the right of an osteopath to utilize certain methods of treatment. The court said:

"Passing to the second contention, the statute makes it plain, we think, that its framers regarded the practice of medicine and surgery and the practice of osteopathy as separate and distinct methods of treating the sick and afflicted, and intended to confine the practitioners of each to the particular system he professed to practice; in other words, to the system in which he had been educated. It is true, no definition of these terms was offered in the statute, but this would only mean that the terms were used in their general and accepted sense, *in the sense in which they were commonly understood at the time of the enactment of the statute*. In considering the contention, therefore, we are not particularly concerned with the meaning of the term medicine and surgery, but rather with the meaning of the term osteopathy; the inquiry being, was the method adopted by the appellant in the treatment of the particular patient a recognized method for the treatment of such a disease under the school of treatment known as osteopathy? If it was a recognized treatment according to that school of treatment, the appellant had a right to practice it under his certificate from the medical board; if it was not so recognized, he did not . . .

"But if all of the osteopathic colleges were now teaching the administration of medicines and the resort to surgery by the knife as a means of curing disease, it would

not aid the appellant. His right is to practice osteopathy as that practice was understood at the time the medical act was adopted, and this we conclude did not sanction the practice resorted to by him in the treatment of the patient mentioned in the information." *State vs. Bonham*, 93 Wash. Rep. 489, 161 Pac. 377.

To a similar effect is *State vs. Emery* (Ohio), 45 N. E. 319, decided by the Supreme Court of Ohio in 1896. The legislature of Ohio had undertaken to adopt the standards of the United States Pharmacopeia as standards of drugs. The court held that the reference must be presumed to be to the United States Pharmacopeia current when the Act was passed, saying:

"It is not to be supposed that the legislature intended to adopt by reference . . . an edition of the book not then in existence, and of which the legislature could then have no knowledge. . . . To hold that the sale could thus be made unlawful would be equivalent to holding that the revisers of the book could create and define the offense, a power which belongs to the legislative body and cannot be delegated." *State vs. Emery* (Ohio), 45 N. E. 319.

In a similar case the Supreme Court of Maine, in 1918, held to the same effect, saying:

"It is not to be supposed that the legislature intended to adopt compilations not then made and of whose contents . . . it could have no knowledge." *State vs. Holland* (Me.), 104 Atl. 159.

Of the same purport are *Commonwealth vs. Costello*, 18 Pa. Dist. 1067, decided in 1908, and *State vs. Crawford*, 177 Pac. 360, 104 Kan. 141, decided in 1919.

Delegation of Legislative Authority Void for Indefiniteness.—It seems clear that any attempt to delegate to the chiropractic schools and colleges of the world, through the initiative Chiropractic Act of 1922, authority to determine from time to time what shall constitute the practice of chiropractic in California is void, because it is an attempted unconstitutional grant of legislative authority. Even, however, if such a grant could be made constitutionally, the question would arise as to whether the attempted delegation of legislative power in the present instance was effective.

The attempt here is not an attempt to delegate authority to an agency of the state, or even to an agency within the state. In fact, it is not an attempt to delegate authority to any clearly defined body of any sort, but an attempted delegation to an unorganized group of private schools and colleges throughout the world, the number and character of which may vary from day to day. It is not necessary that a school, to be a recipient and beneficiary of this grant, be an incorporated school or maintain any particular standards of fitness. Chiropractic schools and colleges conducting their courses solely by correspondence are under this attempted grant of authority given the same power as the most highly organized school teaching chiropractic. Moreover, while the Act refers to what is taught in chiropractic schools and colleges, it fails to state how many such schools and colleges must teach a given method of diagnosis and treatment before that method becomes an integral part of lawful chiropractic in

the State of California. Obviously, such an indefinite grant of power is void by reason of its indefiniteness, even if it might otherwise be valid.

CALIFORNIA CHIROPRACTIC ACT UNCONSTITUTIONAL

From what has been said it would seem as if the initiative Chiropractic Practice Act of California of 1922 is unconstitutional. While it is true that the Act contains the usual saving clause, providing that if any part of the Act is declared unconstitutional, the remainder of the Act will not be affected thereby, it would seem impossible in the present instance to find any part of the Act constitutional if the very groundwork on which the whole structure rests is cut away from it, and that is the effect of finding that the Act fails to provide a proper foundation through a sufficient definition of the subject-matter of the Act, chiropractic.

535 North Dearborn Street.

ACUTE NICOTIN POISONING

AS NOTED IN THE MANUFACTURE AND USE
OF NICOTIN INSECTICIDES

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AS nicotine has gained popularity as an insecticide in the viticultural districts of the interior valleys of California during the season 1931-1932, there have been some newspaper reports of poisoning of persons using nicotine insecticides. Having had no contact with these outside cases, I can say nothing about their symptoms; but as chemist in the research laboratory of a Fresno concern manufacturing large quantities of nicotine insecticidal dusts, I may give my own experiences with acute nicotine poisoning and my observations of poisoning of men engaged in handling nicotine in the preparation of such dusts. Before considering these few cases, I shall review the chemistry and pharmacology of the constituents of those insecticides which contribute to the symptoms of acute poisoning.

NICOTIN POISONING BY INHALATION

Nicotine occurs in tobacco leaves and stems, as the malate and citrate. In most commercial preparations it occurs as the basic alkaloid or as the sulphate, and in cases of accidental poisoning it probably enters the body in one of these two forms. By far the greater number of recorded cases of nicotine poisoning have resulted from accidentally swallowing the alkaloid or its sulphate; the literature is greatly lacking in reports of poisoning by inhalation or skin absorption. Though the effects of inhalation of tobacco smoke are popularly attributed to the action of nicotine, a review of the literature on the toxicity of tobacco smoke shows an inclination to the theory

that many of the toxic symptoms are due to the action of pyridin bases, of which some eight or ten are known to be formed on the combustion of tobacco. Wahl¹ states that the action of tobacco smoke is not pharmacologic but psychic, owing to taste, odor, and visual sensations. Poisoning by nicotine, pure and simple, then, is rare; but tobacco poisoning is very common and has probably been experienced in a mild degree by every smoker in first acquiring the habit. For this reason the cases of poisoning by inhalation of the alkaloid are hardly comparable with those resulting from the inhalation of tobacco smoke. In this connection it was observed, in the preparation of nicotine dusts, that persons habituated to the use of tobacco were not less susceptible to the action of nicotine than were nonhabituated persons. As the period during which the persons observed were in contact with nicotine vapors was not great, I cannot confirm the observations of Wahl¹ that nicotine has a cumulative effect.

NICOTIN POISONING BY SKIN ABSORPTION

In the use of nicotine preparations in various forms, there have been noted occasional cases of poisoning by absorption through the skin. Blyth and Blyth² note nicotine poisoning from the common practice of the peasantry in many parts of England of applying tobacco to stop the bleeding of wounds and also as a poultice to local swellings. This practice is certainly not limited to English peasantry, for the application of tobacco to insect bites, snake bites, and dog bites was by no means unknown to American pioneers and is still carried on to some extent by persons who do not avail themselves of the services of a physician. Occasional cases of poisoning of persons handling nicotine have been noted from absorption of the alkaloid through the skin, followed by characteristic symptoms, when the person handling the nicotine failed to wash the material off his hands immediately. In this local plant, where nicotine dusts are manufactured, particular precaution is taken that none of the liquid comes into contact with the body. Heavy rubber gloves are worn by persons handling nicotine, though this is not an absolute assurance against contact with the liquid, for nicotine attacks rubber to the extent that thin rubber gloves are of no use, whereas heavy rubber gloves are of no use after twenty-four hours in contact with 95 per cent nicotine. The manner in which the person using nicotine-dust insecticides handles the material may be contributory to inducing toxic symptoms. I have noted that in transferring the dust from the container to power dusters it is frequently taken up by the double-handful, the person getting his hands in contact with the nicotine as well as getting his face close to the mouth of the container, from which there is often an evolution of nicotine vapor after release from confinement in a metal container.

SYMPTOMS

The symptoms resulting from nicotine poisoning are considered to be due to the direct influence of the alkaloid on the nervous system. The re-

corded symptoms of nicotin poisoning are that there is first headache, then giddiness, numbness, disturbance of vision, torpor, and quickened respiration. After about half an hour there is a feeling of faintness, intense depression, weakness, cold extremities, and nausea. In cases of my own observation the first symptoms complained of were giddiness, quickened respiration, and nausea. After a variable period the patient usually manifested intense depression with continued nausea and vomiting, though vomiting did not always occur until induced by chemical or mechanical means. Difficulty of respiration was not relieved by artificial respiration, but increased regularly. Although convulsions are said to accompany these other symptoms, I have not seen any convulsions in these acute cases, perhaps due to the small amount of nicotin absorbed. During my laboratory experience in working with nicotin, I noted that excessive secretion of saliva and tears and an aqueous nasal discharge preceded any nausea or other recorded symptoms. The symptoms enumerated by Witherstine³ are: first, nausea and vomiting; quick, deep, then labored respiration; great muscular relaxation, giddiness, mental confusion, restlessness, feeble circulation, general depression and, occasionally, clonic convulsions (of spinal origin) followed by complete loss of reflexes, these varying, of course, with the amount of nicotin and manner of absorbing it.

DOSAGE

The quantity of nicotin necessary to produce characteristic symptoms is an undetermined factor. It is known that some individuals do not react normally to nicotin, but it has been observed that persons in whom the digestive system is not in good order are more susceptible than others. It has also been found that some men, otherwise apparently normal, cannot be exposed to the least nicotin fumes without becoming sick. It has been stated by Dworzak and Heinrich⁴ from auto-experiments that one milligram of the alkaloid produced unpleasant sensations in the mouth and throat, and salivation; two milligrams produced headache, giddiness, numbness, dullness of hearing, and quickened respiration; with three to four milligrams there was a feeling of faintness, intense depression, and purging. One experimenter had shivering of the extremities, muscular weakness, cramps of muscles of the back, and creeping sensations about the arms. Wahl¹ stated that the smallest dose that will begin to produce noticeable effects is one to two milligrams of the pure base. He stated that doses of three to four milligrams taken for several days produced greater effects with each successive dose; it was on this observation that he based his theory that nicotin is cumulative in the body.

Nicotin is absorbed into the blood and excreted unchanged. In experiments with guinea pigs, Noether⁵ found that nicotin injected subcutaneously was found in greatest concentration in the urine, with a considerable amount in the intestine,

and detectable amounts in the liver and lungs. After parenteral injection in man, nicotin appeared in the urine within one and one-half hours and was eliminated continuously by the kidneys for about ten hours. After inhalation, considerable amounts of nicotin quickly appeared in the urine, the time of elimination being about the same, regardless of the smoking habits of the individual. Noether further maintained that there was no evidence of an accumulation of nicotin in the body and that during the night the body again becomes nicotin free. A report of five cases of poisoning resulting from drinking nicotin insecticide was made by McNally.⁶ At necropsy of one case the stomach was found to contain 0.77 gram nicotin, in another, 4.96 grams. As nicotin is unaltered by putrefaction, its presence may be detected a long time after death; Orfila⁷ detected it in an animal two or three months after death.

PHYSIOLOGIC ACTION

The physiologic action of nicotin is a brief primary stimulation of the spinal cord, medullary centers and, in particular, the ganglia of the sympathetic and vasosacral autonomic system, followed by depression of the same nerve cells. These account for rise in blood pressure through vasoconstriction, glandular stimulation, and excitation of involuntary muscle tissues, including those of the alimentary tract and bladder, which small amounts of this alkaloid customarily produce.³

A 1:5000 solution of nicotin base was found by Savadskii⁸ to produce a considerable vasoconstriction of the coronary vessels. Hett⁹ observed that nicotin acts (*a*) through an effect on the vagus, spontaneously reversible and prevented by atropin, (*b*) through a disturbance of the nervous mechanism of the heart, and (*c*) through direct damage to the heart muscle tissue. Nicotin produces a muscular rigidity which can be completely and quickly resolved by the action of cocain.¹⁰ In skeletal muscle, nicotin was observed¹¹ to produce fibrillary twichings on single shocks by induction. As these phenomena do not occur in totally curarized muscles, it was concluded that they must be due to a stimulating action of nicotin on the motor nerve-termination apparatus. They were dependent on the amount of nicotin and the period of its action, becoming less marked as poisoning progressed, and often did not appear when very high concentrations were used. In very dilute solutions, nicotin exerts a stimulating action on the peripheral motor apparatus. In the early stages of poisoning, the stimulation wave is lessened. With increasing concentration of the nicotin the stimulation wave and the fatigue become greater. All these actions are not noted after curarization. It is thus concluded that nicotin acts on the true muscle substance, first as a stimulant but finally produces paralysis. The amount of nicotin required to produce action of the muscle alone is much greater than that required to produce action by the nerve-ending.

TREATMENT

The treatment of nicotin poisoning varies considerably under different conditions. An antidote for nicotin poisoning, as printed on the labels of a popular brand of nicotin sulphate, is as follows: "Drink warm water freely, then empty stomach by causing vomiting or by stomach tube. Give strong coffee or tea. In severe cases, use warm applications to chest and extremities and cold applications to head, give 1/30 grain strychnin tablet in water every hour until relieved, or until four tablets have been taken." Witherstine³ recommends that if there is no free emesis, apomorphin hydrochlorid be given hypodermically and the stomach washed out with tannic acid solution or strong tea or a solution of iodine in potassium iodid. To hasten elimination he recommends giving spirits nitrous ether, 60 minims, or give water freely. To counteract the symptoms he suggests a hypodermic injection of strychnin nitrate, 1/25 grain, or tincture nux vomica, 30 minims, by mouth, and keep patient in recumbent position with warm applications to chest and extremities and cold applications to head. As these methods apply very well to cases in which the poisoning has resulted from swallowing the nicotin, it appears that several are superfluous for treatment of poisoning following absorption by the skin or the mucous membrane of the respiratory tract. In the former cases, washing the stomach and inducing emesis by means of apomorphin hydrochlorid seem to have as their object the removal of nicotin from the stomach; administering tea and coffee and tannic acid solution result in chemical precipitation of the alkaloid as the insoluble tannate; and the iodine-potassium iodid solution also forms an insoluble compound with nicotin. In cases of poisoning by inhalation and skin absorption these would not be of use. The object should be to hasten elimination and neutralize the symptoms.

In treatment of the ten persons suffering from acute nicotin poisoning who were brought to the plant laboratory for emergency treatment, the patient was first relieved by inducing vomiting by having him take large quantities of warm water into the stomach. On only one occasion was it necessary to use a hypodermic injection of apomorphin hydrochlorid, 1/10 grain, to induce emesis, this chiefly to relieve the patient rather than an attempt to remove any poison from the stomach. The next step was to give strychnin nitrate, 1/30 grain, hypodermically, if the patient was not relieved within fifteen minutes. On one occasion atropin hydrochlorid, 1/150 grain, was given hypodermically instead of strychnin nitrate. It appeared to have no advantage over strychnin as an antidote. All medication was given with the advice of a physician. One patient, an elderly man of weak physique, would not consider treatment, and when approached with syringe and needle for hypodermic injection of strychnin nitrate he fought vigorously and screamed at the idea of giving him anything hypodermically. He explained afterward that his dread of

the sight of a hypodermic needle was because of the apparent pain which his wife suffered on the frequent occasions of hypodermic medication for treatment of mammary carcinoma. As he would not knowingly permit any medicine to be given to him, strychnin sulphate, 1/10 grain, was dissolved in half a glass of water and he was persuaded to drink it on the promise that some water in his stomach would relieve the nausea. The action of the strychnin in this case was, of course, slower than when given hypodermically, but the patient reported on the following day that all disagreeable symptoms were relieved within two hours after taking the solution of strychnin sulphate. As a final emergency aid in these acute cases, the patients were sent home with instructions to remain quiet for at least twenty-four hours, to drink large quantities of water with an occasional saline diuretic, and, without fail, to call their physician if other symptoms occurred. In none of these ten cases of acute nicotin poisoning were the patients unable to return to work on the following day, though often complaining of weakness resulting from increased purging during the preceding night. All symptoms of nicotin poisoning apparently were absent after forty-eight hours.

As the ten cases of nicotin poisoning which were observed in connection with the manufacture of nicotin insecticidal dusts presented only acute symptoms which were readily relieved by administration of physiologic antagonists, it is concluded that poisoning by inhalation or skin absorption of nicotin in the course of its use in open-air application as an insecticide is not likely to present symptoms approaching the moderate severity of the acute symptoms resulting from breathing air and handling liquids having a high concentration of nicotin base.

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DISCUSSION

C. D. LEAKE, Ph. D. (University of California Medical School, San Francisco).—With the growing application of pharmacology to fields other than medicine, such as rodent control, fruit spraying and fumigation, and food preparation, it is imperative that the medical profession keep abreast of developments along these lines in order to be prepared for the occasional untoward effect likely to happen to humans who may incur accidental poisoning from the chemicals involved. Opportunity should, therefore, be afforded by medical journals for notes by qualified experts on recent advances in work of this sort. Much of such information is not called to the attention of physicians. For example, if J. C. Munch's admirable survey of thallium toxicity (*Tech. Bull.* No. 238, United States Department of Agriculture, Washington, April, 1931) had been brought to the notice of California physicians, some of the recent difficulties with the use of this poison in rodent control might have been avoided. Similarly, many public health reports cover work on the toxicity of new commercial chemicals of possible danger to man, and these should be occasionally reviewed for physicians. Mr. Stevenson's paper on nicotine poisoning may be found to contain many points of interest to the average practitioner. It is the sort of expert survey on a practical pharmacologic problem which should appear more frequently in general medical journals.

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C. H. THIENES, M. D., Ph. D. (University of Southern California School of Medicine, Los Angeles).—Because of the rapidity with which death follows the taking of a large dose of nicotine, physicians are inclined to consider that any efforts which might be expended are of no avail, that such cases as might recover under treatment would have recovered without treatment. The cases reported in this paper would be classed in the latter category. In some cities physicians are shirking their duty in the care of cases of acute poisoning by sending them to municipal emergency hospitals. This loss of time is not infrequently responsible for the death of patients whose lives might have been saved by immediate treatment. Progress in the prophylaxis and treatment of cocaine poisoning, following the work of Tatum and coworkers with barbituric acid derivatives, and the recent reports by Haggard and others of the value of apomorphin in strychnin poisoning indicate that the fatalistic attitude of many members of the profession toward acute drug poisoning is founded in part on ignorance and in part on the lack of intensive studies of such problems in experimental laboratories. In this connection it may be stated that tests of central nervous system depressants against nicotine poisoning in the rat, now being made in this laboratory, suggest that further progress may be expected in this direction.

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P. J. HANZLIK, M. D. (Stanford University School of Medicine, San Francisco).—Reports of cases of poisoning are always interesting and important, especially when they deal with personal experiences and special conditions of using a poison. Mr. Stevenson's personal experiences with nicotine confirm the well-known actions of this poison, and the use of it under his conditions has not changed the actions in essential particulars. It will not be generally admitted, however, that the systemic effects of tobacco smoke are not due essentially to nicotine. Anyone unconvinced of this should compare the effects on a frog exposed to tobacco smoke with another frog which has received nicotine. Moreover, human cases of tobacco

poisoning have faithfully recapitulated all the symptoms of nicotine poisoning. While there are other potentially toxic constituents in tobacco smoke, the quantities are so small as to render their significance practically unimportant. Any psychic and euphoric effects are not peculiar to tobacco smoking, or of importance in acute poisoning.

In the treatment of nicotine or tobacco poisoning, too much reliance should not be placed on strychnin. Its use is mainly empirical, because it cannot overcome the paralytic effects of nicotine on the respiration and ganglia, which first of all have been powerfully stimulated, then depressed and paralyzed by the poison, and the paralysis is apt to be widespread and complete. The supposed circulatory stimulation of strychnin is scarcely worthy of consideration here. It is possible that, through central nervous stimulation, strychnin may be of aid in cases of partial or incomplete nicotine poisoning by promoting recovery from general weakness. However, if the poisoning is not complete, recovery occurs frequently without treatment. Paralytic cases are commonly and rapidly fatal. To promote recovery from the general weakness commonly accompanying nonfatal cases of nicotine poisoning, complete rest and drinking strong black coffee will generally suffice. In any case, the treatment of acute nicotine poisoning must be early and speedy to be effective: if the poison has been swallowed, gastric lavage with potassium permanganate (1:2000) solution (especially if vomiting has not occurred) rest, external heat, and strong hot coffee; artificial respiration, caffeine and digitalis, if necessary. Caffeine is a safer respiratory and central stimulant than strychnin. If the poisoning has occurred from parenteral administration, permanganate is not used, but reflex and direct stimulation of the respiration and circulation, and the use of general supportive measures, are indicated.

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MR. STEVENSON (Closing).—Though it may not be generally admitted that the systemic effects of tobacco smoke are not due essentially to nicotine, one should not ignore the fact that numerous active compounds are formed on the pyrolysis of the nitrogenous constituents of tobacco. Of these nitrogenous bases, pyridin, the basic nucleus of the nicotine molecule, occurs in largest quantity. Popp and Contzen (*Estimation of Nicotin in Tobacco and Tobacco Smoke*, Chem. Ztg., 46:1001-2, 1922) found that many of the alkaloidal precipitants cannot be used for the determination of nicotine in tobacco smoke. This is particularly true of silicotungstic acid because this reagent also forms an insoluble compound with pyridin, which was found in considerable quantity and accordingly gave inaccurate results. Many textbooks of *matéria medica* assert that pyridin, pyrrole, quinolin, and isoquinolin occur in tobacco smoke. The physiologic action of pyridin is said to be similar to that of piperidin, but more energetic. It produces paralysis of the motor nerves by its effect on the motor centers. There are also destructive changes in the blood corpuscles, and paralysis of the heart.

It was asserted that any psychic or euphoric effects are of no importance in acute poisoning. I do not agree with Wahl that pure nicotine alkaloid has a psychic effect, but the majority of information at my disposal agrees that a psychic reaction is to be obtained from tobacco smoke. My object in drawing attention to the physiologic action of the products of pyrolysis of tobacco and the psychic action of tobacco smoke is to emphasize the all too common error of considering nicotine poisoning as synonymous with tobacco poisoning. This should not be considered true any more than we might consider the action of opium as being identical with that of any one of its constituent alkaloids.

It is hoped that the researches of Doctor Thienes will clear up some of the inconsistencies that occur in regard to suitable physiologic antagonists to nicotine poisoning.

MUSCULAR FATIGUE, MUSCLE STRAIN AND MUSCLE CRAMPS*

By RUDOLPH MARX, M. D.
Los Angeles

THE muscle as an energy-producing engine equals in efficiency the best man-made motor. Up to 35 per cent of the chemical energy used up during its action is transformed into useful power—the same as in the Diesel motor. The comparative efficiency of a modern steam-engine is only about 25 per cent; of a gasoline motor it is still less.

The main sources of muscular energy are glycogen and phosphagen. During exercise glycogen is changed into lactic acid, and phosphagen is broken down into creatinin and phosphoric acid. This process is accompanied by an increase of acidity. However, during the period of "recovery" these chemical processes are reversed, as in the charging of a battery. Under normal conditions this restitution is accelerated and completed by addition of oxygen.

MUSCULAR FATIGUE

Accumulation and insufficient removal of the decomposition products of muscular activity lead at first to a transient condition of increased irritability, followed by lessened irritability of the muscle cells. The latter state of more or less complete loss of muscular irritability and contractability is called "fatigue."

After the appearance of marked fatigue, a muscle usually shows improvement of irritability if it is given a short rest. But depending upon the age of the individual and condition of "training," intervals of some hours and even days may be required before a fatigued muscle regains the full capacity to perform its work.

If the fatigue-creating substances of a muscle overflow into the general circulation, or are experimentally injected into animals, they produce symptoms of general fatigue. The first effect is the depression of other muscles, including the muscles of the heart and blood vessels. This in turn leads to a diminution of circulation and oxidation and the vicious cycle of added fatigue. The functioning of the nerve cells and the central nervous system also suffer—directly by the fatigue substances and indirectly by diminished oxidation (except the breathing center, which is stimulated by the increased carbon-dioxid tension). This results in the impairment of muscular power, tempo and coördination of intentional and unintentional motion and motion sequences.

By repeated exercise ("training") the muscle is made to gain in size, tonus, strength, and power of recuperation. Its fibers grow larger, storing up more glycogen; the size of its blood vessels and the amount of blood circulating in it increase, and the acid-binding power of the muscle proteins seems to grow. (The muscles of the heart respond in a similar way.)

* This outline was prepared from various sources for the consideration of the Medical Committee of the Olympics at Los Angeles.

MUSCULAR STRAIN

If stimulation of the muscle is continued after the state of fatigue is reached the muscle is apt to be damaged and "muscular strain" results. After the muscle has used up its own reserve material, eventually other glycogen brought up from the liver, and also its alkaline buffer substances, less suitable protein material of its cells may be called upon to produce energy and chemical balance. The evidence of this fact is the increased nitrogen output which results from exhausting exercise. If these destructive processes are permitted to go beyond a certain point, they produce more or less far-reaching physicochemical alterations in the muscle tissue. These changes are often accompanied by an inflammatory reaction, edema, and stiffness. The popular name for this condition of strain of muscles and muscle groups is "charleyhorse." The extreme possible consequences of such a state are muscular atrophy and contraction, which, however, occur only in rare instances.

In this connection it may be interesting to mention that the physicochemical alterations in the muscle substance, produced by extreme strain, seem to approach closely the changes seen in post-mortem rigor. It is known that the muscles of persons dying after exhaustive efforts or from tetanus develop the condition of rigor mortis immediately or shortly after death; whereas the same process normally takes several hours to develop.

Muscular strain is apt to leave the muscles in a condition of increased irritability, with a tendency to cramps. By the term "muscular cramps" we understand involuntary painful spasms of muscles.

MUSCLE CRAMPS

Muscle cramps are usually brought on by sudden, exaggerated or wrongly directed impulses when a muscle action does not meet the anticipated amount of resistance or is not checked by the controlling antagonistic muscles, as is normally the case. After producing a maximum contraction the superfluous amount of muscle energy liberated by the disproportionate impulse is converted into a muscular spasm. This implies that a muscular spasm surpasses in intensity a voluntary muscular contraction. That part of the energy produced by it which is not converted into labor is transformed into heat.

The disposition to involuntary sudden contractions is increased in muscle groups which are in an advanced state of special training. They are conditioned to immediate response; their action has become almost automatic and reflex-like, and the slightest stimulus can make them contract. Then, as mentioned before, the irritability of muscles is also increased by a certain concentration of fatigue products.

In swimming the inhibiting effect of the cold on the peripheral circulation can also contribute to the disposition to cramps. The diminished circulation may be insufficient for the oxidation and removal of waste material in muscles, leading to ischemic pain and tendency to spasms.

PREVENTION AND TREATMENT

It is easy to understand that prevention of the conditions mentioned is only possible to a limited degree. And little can be said about their prevention and treatment that experienced trainers do not know. The theories merely support the practical rules of training which were found empirically.

To mention these briefly. The training work should be started with small demands and increased gradually. Sufficient rest periods must be interspersed. No effort in training should be carried to the point of complete muscular exhaustion. Once the muscles have reached a state of severe fatigue or strain, they should not be exercised until they have fully recuperated.

The process of recovery can be accelerated by the accepted methods known to stimulate the recuperation and circulation of the muscles, *i. e.*, heat in any form, and massage.

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THE OVARY OF THE RAT AFTER
HYPOPHYSECTOMY

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MUCH former experimental work has shown that the functioning of the ovary depends upon the presence of the hypophysis and its hormones. In another paper of this series it will be shown that an excess of these hormones has a depressing effect upon the growth of follicles and the production of new germ cells. A further study of the hypophysectomized rat reveals the rather surprising fact that the hypophyseal hormones in normal amounts, so necessary for follicular growth, also depresses ovogenesis or the production of new germ cells.

Eight rats were hypophysectomized at varying times from twelve to ninety days before autopsy (see Table 1). The ovaries of these were serially sectioned and stained with uniform procedure for each. The ova and primordial follicles in the entire ovary were counted, with the few larger follicles and corpora that were present, a single ovary being used from each rat. The results of these counts are shown in the appended table.

After hypophysectomy the ovary of the rat rapidly shrinks to a small size. In the ovaries we have studied, from four to thirty corpora lutea were present, the remainder of the ovary being filled with interstitial tissue and primordial follicles and ova. The corpora are remarkably persistent structures in these ovaries. Smith¹ found that corpora one-half millimeter in diameter were still in evidence at nine and one-half months after the operation. Although, in our own rats, evidences of regressive changes have appeared in all of the corpora, yet the size undergoes relatively little diminution in the first fifty days following the operation. In rat 1130, the largest corpus was about one-half that of the early part of pregnancy.

TABLE 1.—Ova and follicles in hypophysectomized rats.

Rat	Days After Hypophysectomy	Ova and Primordial Follicles	Corpora	Total	Age
5976	12	2822	30	2852	117
5929	20	4311	23	4334	95
4343	35	4100	30	4130	123
1121	50	3927	4	3931	166
8643	50 right	3681	22	4703	
	64 left	4969	41	5010	
1141	62	4715	9	4724	186
1081	79	3605	17	3622	203
1130	90	4345	8	4351	202

Those that were pregnant at the time of the operation show slightly larger corpora than were present in the nonpregnant rats. The number decreases by the end of fifty days, those that persist being probably the last "crop" which ovulated.

Interstitial tissue increases with the gradual disappearance of the older corpora and large follicles in these ovaries, and, in most cases, shows degenerative changes in the nuclei. In addition to that formed from degenerating follicles and corpora, the germinal epithelium also adds to the supply by the formation of groups of cells which are indistinguishable from other interstitial cells after they have severed all connection with the epithelium. This is relatively rare and is the same process that occurs normally during both the pregnant and nonpregnant periods.

The production of new germ cells is abundant in the ovary of the hypophysectomized rat. When the number of these was counted, it was found that the amount of ovogenesis, as shown by the number of ova and primordial follicles, was greater than is found in the ovary during the normal oestrous cycle or in pregnancy, the number produced being from two to three times that found in the normal rat. These counts are shown in the table. The germinal epithelium shows active proliferation of single ova as well as epithelial cords from which ova are developed, processes similar in every respect to those found in the normal rat.²

In the small follicles, which may occasionally reach a fairly large size (270 microns in diameter in rat 1130 at day 90), with six or eight or even more rows of cells in the granulosa, growth, as shown by the number of mitoses in the cells of the granulosa, seems to be about as rapid as in the normal ovary. As many as a dozen or more mitotic figures may be seen in one section of a follicle 200 microns in diameter. These evidences of normal growth in small follicles, combined with the amount of active proliferation from the germinal epithelium, seem to establish the fact beyond doubt that the large number of ova and primordial follicles found in these ovaries is not an accumulation over long periods of time, but is the result of an actually greater rate of ovogenesis than occurs in the normal rat. This increase evidently begins a short time after hypophysectomy and seems to be due to the withdrawal of the hormones of the hypophysis.

The amount of atresia in the small follicles and ova also offers further evidence to establish this point. Very many ova degenerate before the primordial stage is reached, a few follicle cells only being present. Those that reach a larger size soon degenerate, resulting in the presence of much interstitial tissue. Mitotic division of the nuclei, even to the formation of typical polar bodies or of several larger cells, is frequent in these atretic follicles as in those of the normal rat. Such an amount of atresia would not take place if only the normal number of new germ cells were being formed, with a slow accumulation to produce the large number actually present.

In this group of rats four were pregnant at the time of operation, this occurring at the ninth and twelfth days of pregnancy. There were no differences, either in morphology or in the rate of ovogenesis, between these and the remainder of the group which were nonpregnant at the time of operation, except in the size of the corpora, the latter having the smaller corpora.

One ovary was removed from one rat at the fiftieth day after hypophysectomy and the remaining ovary secured at the sixty-fourth day. When the ova and primordial follicles were counted it was found that more ova were present at the latter date, but this probably represents only a normal variation.

A further discussion of the significance of these findings will be given in subsequent papers.

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CORONARY DISEASE—ITS PATHOGENESIS*

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AND

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DISCUSSION by William H. Leake, M. D., Los Angeles;
Donald J. Frick, M. D., Los Angeles; Eugene S. Kilgore,
M. D., San Francisco.

THIS contribution is concerned principally with the etiology and pathogenesis of lesions of the coronary arteries. It is based largely on a review of the records of 8,500 autopsies. Three groups of heart lesions have been segregated, first 114 cases of recent coronary occlusion, second 58 cases in which the heart showed evidence of healed infarction, and third, 135 cases of diffuse myocardial fibrosis without definite localized scarring.

OUTSTANDING FEATURE OF CORONARY DISEASE

The outstanding feature of coronary disease is the presence of arteriosclerosis (intimal athero-

sclerosis) involving greater or less portions of the coronary arteries with consequent lessening of the blood stream, and often associated with thrombosis resulting in complete obstruction. These disturbances profoundly influence the function and structure of the cardiac muscle. Other lesions such as syphilitic arteritis and embolism occur less frequently.

The importance of organic heart disease needs no emphasis. Of the recognized types of heart disease the group including the hypertensive disturbances and the coronary lesions is by far the largest. This group of heart cases is often said to have "chronic myocarditis." It would seem that from both the pathological and clinical viewpoint the use of this term should be discouraged and more accurate terminology used.

The American Heart Association¹ uses the term "arteriosclerotic heart disease," their definition appearing to lack in clarity and definiteness and seemingly including the concept of systemic arteriosclerosis as well as sclerosis of the vessels of the heart itself. From the standpoint of the pathologist it would seem preferable to confine the term to those hearts exhibiting localized atherosclerosis. It is recognized that coronary arteriosclerosis of high grade may occur without any marked sclerotic changes in other parts of the body; and, conversely, that generalized arteriosclerosis of high grade may exist without any serious involvement of the vessels of the heart. The series here studied supports this view.

CAUSATIVE FACTORS OF ARTERIOSCLEROTIC DISEASE

Assuming that the characteristic lesion of coronary heart disease is the sclerosis of these arteries, it is obvious that the essential causative factor is the underlying cause of arteriosclerotic disease, whatever that may be. Much has been written, but there is no general agreement among students of medicine as to its cause. Is it the pressure of the circulating blood? Is it some toxic agent, organic or inorganic? Is it an inherent defect of metabolism? It is quite generally recognized that we have no definite evidence incriminating lead, alcohol, tobacco, or bacterial toxins. We do know that often several members of the same family are victims of coronary disease, suggesting a hereditary tendency.

There are some facts which seem to support the contention that the intravascular tension is an essential factor. These include the fact that arteriosclerosis of the systemic circulation is almost universal in old age; but that normally the pulmonary arteries, with their lower blood pressure, are unaffected. On the other hand, in circulatory disturbances which result in abnormally high pressure in the pulmonary circulation, arteriosclerosis does occur in those arteries. In hypertensive disease arteriosclerosis occurs at a younger age than otherwise. These observations lead to the assumption that arteriosclerosis may result on the one hand from long-continued normal pressures or, on the other hand, occur more quickly in the presence of abnormally high pressures.

* Read before the joint meeting of Pathology and Bacteriology and General Medicine sections of the California Medical Association at the sixty-first annual session, Pasadena, May 2-5, 1932.

RELATION TO ARTERIAL
HYPERTENSION

Levine in his monograph on coronary thrombosis makes the rather surprising statement that "a previously existing hypertension is probably the most commonly seen etiologic factor in the development of coronary thrombosis" but that hypertension is not an essential factor, as is indicated by a sufficient number of patients who are known not to have had hypertension.

The categorical statement that hypertension is a cause of coronary thrombosis would seem to deserve some consideration. Other types of arteriosclerotic accidents, such as cerebral thrombosis and cerebral hemorrhage and arteriosclerotic gangrene of the extremities, are analogous to coronary accidents. These may occur in patients who do not have and have not had marked arterial hypertension. If hypertension *per se* can be shown to be an important factor in producing atherosclerosis, we should have to accept the opinion that it is a factor in coronary disease. In Levine's series of 145 cases of coronary occlusion (forty-six of which were proved by autopsy) 40 per cent were known to have had hypertension. (For this purpose he included those cases having systolic of 160 or more, or diastolic 100 or more.) Among our 114 autopsied cases of recent occlusion there were seventy-two in which blood pressures were recorded and of these 44 per cent had hypertension as just defined.

The almost constant occurrence of cardiac hypertrophy as is indicated by our data, as well as the high incidence of clinical hypertension, make it clear that there is a definite relation between hypertension and coronary disease. The average heart weight of the entire series, excluding those cases with valvular lesions of the heart and adhesive pericarditis, was 520 grams in the male and 469 grams in the female. This hypertrophy was chiefly of the left ventricle and was presumably due to hypertension.

It is well to attempt to define the place occupied by coronary artery disease in the great group of cardiovascular diseases. The nature of its relation to the hypertensive group is open to question. According to present views, essential hypertension is bound up with the lesion called arteriolar sclerosis (Gull and Sutton's² arteriocapillary fibrosis). On the other hand, coronary disease is clearly the immediate result of atherosclerosis of the coronary arteries, and thus constitutes a part of that important group of cardiovascular diseases of which the other most notable examples

are cerebral thrombosis and cerebral hemorrhage, thrombosis of the large arteries of the lower extremities resulting in arteriosclerotic gangrene, and the less frequent cases of mesenteric artery thrombosis.

Age.—The average age at death from coronary occlusion is in the early sixties. In our series the average for men was sixty-three and for women sixty-two years. Death rarely occurs under forty and is almost unknown under thirty. In our series there were three cases under forty (and at the other age extreme six cases over eighty). These facts, of course, are consistent with the known incidence of arteriosclerotic changes in general. Very rarely coronary occlusion by thrombosis occurs in children or even infants. Such a case was recently reported by Ramsey and Crumrine.³ A child of four months was shown to have died as a result of coronary thrombosis with infarction following a severe respiratory infection which occurred one month previously. It is obvious that in children and infants the cause of the thrombosis is a purely inflammatory lesion and not a typical atherosclerosis.

An important consideration in age relationship is the probability that the cardiac circulation becomes better able to accommodate itself to an occlusion as age advances. The changes occurring in the coronary circulatory apparatus from childhood to old age have been beautifully portrayed by Gross⁴ in his classical monograph on "The Blood Supply of the Heart." His illustrations, based upon injection and corrosion preparations as well as upon radiographs of injected hearts, make it clear that certain characteristic alterations occur. Among these are the great increase in tortuosity of the large and medium-sized arteries, which change is probably related to those conditions which lead to the occurrence of occlusions. On the other hand, those changes which presumably enable the heart

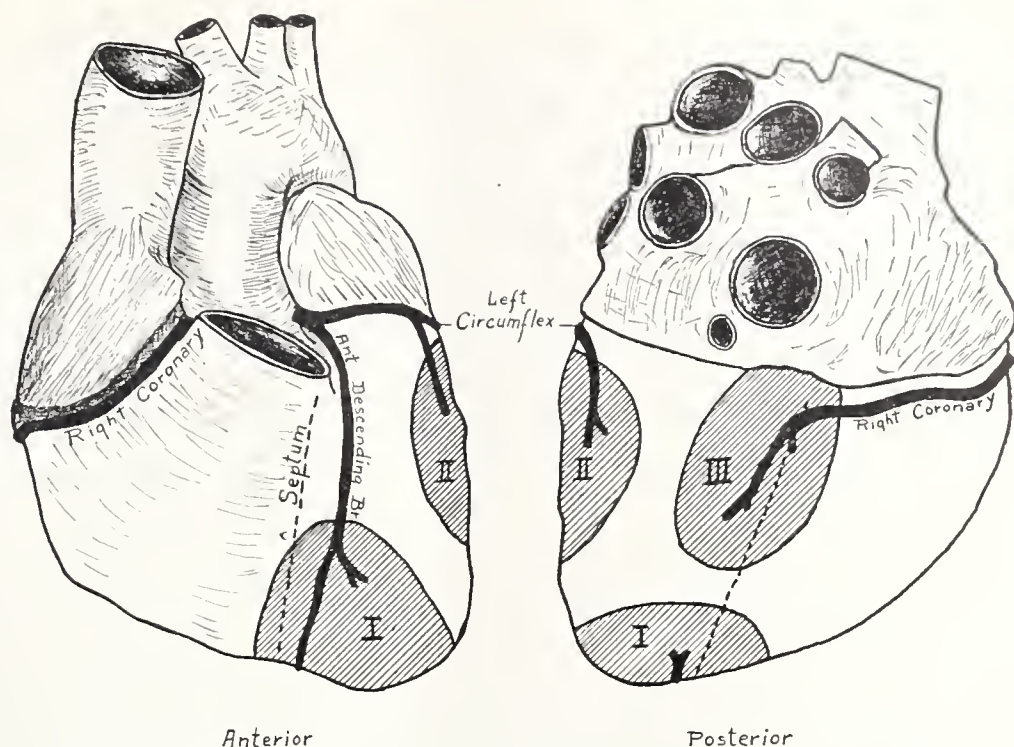


Fig. 1.—Diagrammatic illustration of the three usual sites of cardiac infarction in relation to the main branches of the coronary arteries.

to better withstand the effects of these occlusions are a marked increase in the size and probably the number of anastomosing arterial channels. These latter are most easily demonstrated in two locations, first in the interventricular septum, and secondly in the epicardial fat which normally greatly increases with age. The anterior portion of the interventricular septum is regularly supplied by the descending branch of the left coronary artery, the posterior portion by the right coronary artery. Gross's pictures show an immense increase in the connecting arterial channels within the septum in the aged. The epicardial fat also gradually becomes filled with a network of small arterial channels which evidently may serve as a means of collateral circulation between the larger branches of the coronary arteries.

Statistically our cases would seem to harmonize with the assumption that the older heart succumbs less quickly to a coronary occlusion. Obviously a visible infarction following occlusion requires time to develop; those cases dying within a few hours exhibit no myocardial changes, while those living for a longer period present detectable areas of necrosis. Our group of hearts showing recent thrombosis with evident infarctions averaged 63.3 years of age, while those having recent thrombosis but without infarction averaged 59.9 years.

Another protective factor in the circulation of the heart in persons in the coronary age period is assumed to be an acquired capacity of the Thebesian veins to compensate for coronary inadequacy. The fact that certain hearts may continue to function after almost total occlusion of both coronary arteries makes it appear that some other means of circulation must exist; and these minute vessels may furnish the explanation. However, satisfactory evidence of this is not as available as is that pertaining to the communicating mechanism in the coronary septum described by Gross.

Sex.—All observers have noted the remarkable preponderance of males over females in coronary disease. In the present series (114 cases of recent occlusion) there are more than three times as many men as women.

Diabetes.—The frequent association of coronary accident with diabetes has been noted by many observers. Some have assumed that there is some direct relationship between the two conditions; but as pointed out by Levine⁵ those victims of coronary disease who also have diabetes do not die at any younger age than those without diabetes, which seems to indicate that the diabetic condition does not hasten the fatal outcome of coronary disease. Our figures are in agreement with this observation. Of the 114 recent occlusions only approximately nine per cent had clinical diabetes and their average age was identical with that of the nondiabetic cases.

Syphilis and Other Infectious Diseases.—There are 136 cases of syphilitic heart disease in the 8500 autopsies reviewed for these data on coronary disease; thirteen cases presented marked narrowing of one or both coronary artery orifices due to syphilitic aortitis. However, in none of these cases did the syphilitic arteritis extend for more than a millimeter or so beyond the orifices of the coronary arteries. These observations are in accord with those of Saphir,⁶ who failed to find a syphilitic lesion of the coronary arteries beyond their mouths in a careful histological study of 130 hearts from cases of syphilitic aortitis with aortic regurgitation. The etiologic importance of syphilis, excluding this group of cases of luetic aortitis, is presumably negligible. In the series (305 cases of coronary disease) here reported, 10 per cent had positive Wassermann tests. The incidence of positive Wassermans in the hospital population and in cases coming to autopsy is probably only slightly less than this figure. The view has been expressed by some

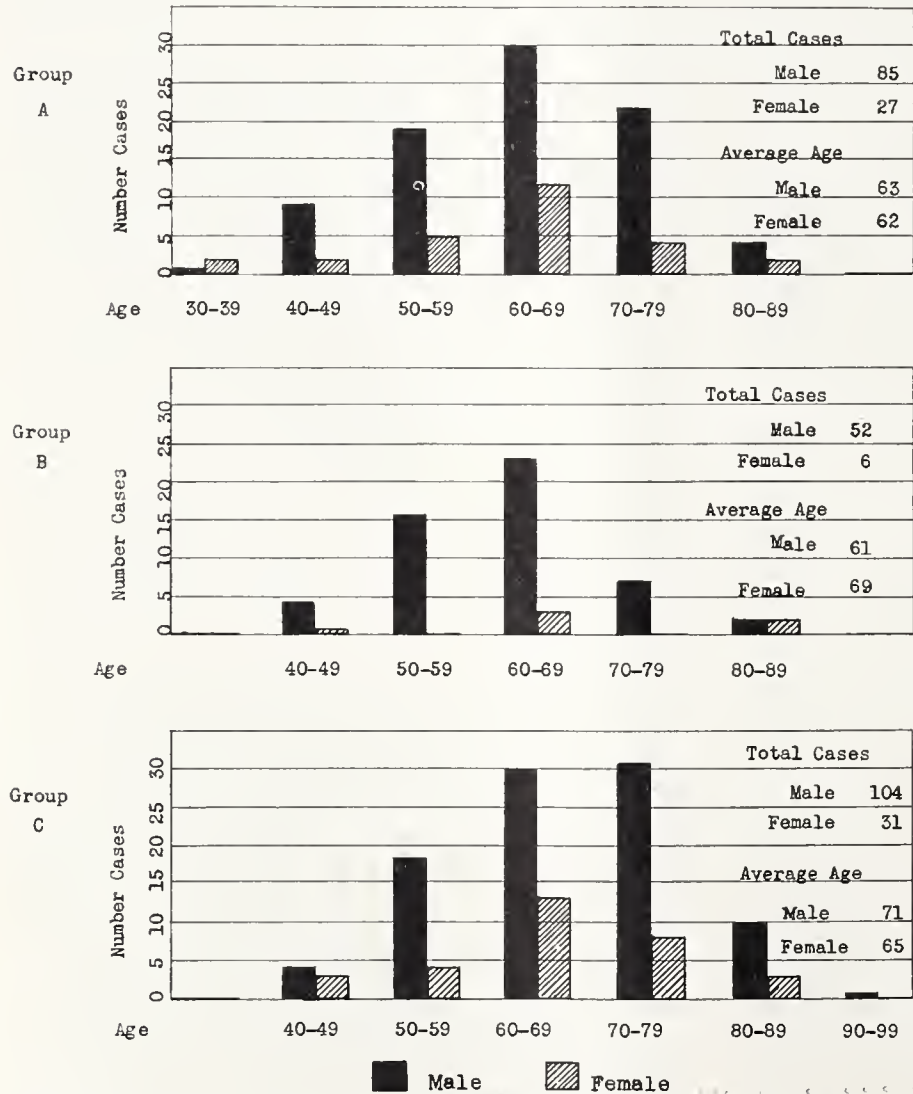


Fig. 2.—Graphs showing age and sex distribution of coronary disease in 305 cases occurring in 8,500 autopsies. Group A—114 cases of recent coronary occlusion. Group B—58 cases presenting healed infarctions. Group C—135 cases of diffuse myocardial fibrosis.

investigators that in a large proportion of persons with myocardial fibrosis the condition is etiologically related to syphilitic infection, which is said to be a latent type or stage of syphilis. This appears to us improbable. That the Wassermann test is reliable as an indicator of syphilitic heart disease (aortic valvulitis) and syphilitic aortitis is shown by the fact that in the series of 136 cases of leucic aortitis and syphilitic heart disease in our autopsy records, 90 per cent of those tested show a positive Wassermann.

From our data we are unable to determine any etiologic importance of any other infectious diseases or foci of infection. The same is true regarding personal habits in relation to alcohol and tobacco. However, it is interesting to note that in Group A (112 cases of recent thrombosis or infarction) there were eight cases in which cardiac symptoms began during or immediately following an infectious disease. The infectious disease was influenza in five cases, and pneumonia, erysipelas, and peritonitis in one case each. This incidence is no more than may be accounted for by coincidence. Influenza was the most frequent acute infectious disease recorded in the past histories in the entire series of cases. Pneumonia came next in frequency.

Coronary Embolism.—There were nine cases, all in males. The age varied from twenty-four to seventy-one years and averaged forty-three years. The Wassermann reaction was negative in all. In eight cases the source of the embolus was an acute bacterial endocarditis of the mitral or the aortic valve superimposed upon a chronic deforming endocarditis. The emboli were small and caused infarctions less than two centimeters in diameter. In the ninth case the embolus was apparently from a thrombus attached to the endocardium of the left ventricle and resulted in complete occlusion of the left coronary artery.

The anatomical distribution in the heart of typical areas of infarction and the usual location of the points of occlusion in the branches of the coronary arteries are shown in the accompanying illustration (Fig. 1). It is generally accepted that by far the most common location of acute occlusion is in the anterior descending branch of the left coronary; and that the corresponding cardiac area, the apex and anterior wall of the left ventricle, is most frequently infarcted. Accordingly this arterial branch is considered "the artery of cardiac infarction" and has been looked upon as the "artery of sudden death." It is generally accepted that the wall of the left ventricle is the only portion of the heart which is subject to infarction except as the necrotic areas of the left ventricle extend in a minor degree into adjacent portions of the right ventricle and particularly into the interventricular septum. A rare case⁷ of rupture of the wall of the left auricle, presumably from infarction associated with thrombosis of both coronary arteries, has been reported. Barnes and

Ball,⁸ in a series of forty-nine autopsies, found that occlusion of the anterior descending branch of the left coronary was not much more frequent than occlusion of the right coronary with its characteristic infarction of the posterior wall of the left ventricle; the anterior descending branch being occluded twenty-eight times and the right coronary twenty times. They contend that if more careful inspection of the heart were made at autopsy, the great apparent preponderance of left anterior branch lesions would be found not to exist. In our series the relative frequency was ninety-six cases involving the left anterior branch and twenty-four involving the right coronary.

SUMMARY

From our review of possible etiologic factors presented in the records of coronary occlusion occurring in a series of 8,500 autopsies we conclude that:

1. The great majority are caused by coronary artery atherosclerosis and resultant thrombosis.
2. Much less frequently do embolism and syphilitic arteritis play a part. In about 10 per cent of cases of syphilitic aortitis, marked narrowing of one or both coronary orifices results; but rarely if ever does the lesion extend very far beyond these orifices.
3. Very rarely, as in some instances in childhood, do inflammatory changes without arteriosclerosis serve as a focus for thrombosis.
4. Arterial hypertension with resultant cardiac hypertrophy characterizes a large proportion of these cases.
5. The average age at death is sixty-two or sixty-three years.
6. There is a remarkable preponderance of men over women who succumb to this disease; in this series, three and two-tenths to one woman.
7. The condition is frequently associated with diabetes, but coronary cases with diabetes do not die earlier than those without diabetes.
8. No etiologic relationship could be determined for infectious diseases or foci of infection nor for the use of alcohol or tobacco.

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DISCUSSION

WILLIAM H. LEAKE, M. D. (1930 Wilshire Boulevard, Los Angeles).—This careful review of autopsy records is of value in furnishing data which strengthen our present conception of the possible etiologic factors in coronary disease. In the light of our present knowledge it is evident that the incidence of this crippling and fatal disease can be lessened only by the prevention of atheromatous changes in the blood vessels. Although the average age of death in this series is about sixty-two years, it must be remembered that coronary thrombosis occurs with alarming frequency in much younger individuals.

It is generally conceded that syphilis plays little part in the causation of coronary thrombosis inasmuch as it does not involve the course of the coronary arteries. The symptoms of coronary disease frequently associated with syphilitic aortitis may be explained by the narrowing of the orifices of the arteries, as noted by the authors in some of their cases of luetic heart disease.

Clinicians are beginning to believe that heredity plays a definite part in the etiology of coronary disease. One is impressed by the number of patients whose family histories reveal a high incidence of degenerative cardiovascular conditions.

Infarction of the myocardium in practically every instance occurs primarily in the wall of the left ventricle, and this holds true in occlusion of the right coronary artery as well as the left. The reason for this is demonstrated clearly by the illustration in Figure 1.

It has been only during the past fifteen years that serious attention has been paid to the study of coronary disease. In spite of extensive investigation by many capable clinicians during this relatively short period, the fact remains that much confusion still exists concerning its etiology.



DONALD J. FRICK, M. D. (804 Medical Office Building, Los Angeles).—This presentation, based on autopsies in a large number of patients showing coronary damage, is of utmost importance. The analysis of the possible predisposing causes gives us more data for future study and possible prevention of this most disastrous condition.

Arteriosclerosis, as we have known for a long time, is the principal cause of coronary artery narrowing or occlusion; syphilis and embolism being rare causes of complete or partial occlusion. Syphilitic damage we have in our power to prevent. Embolism can be made a negligible factor by proper care in infectious disease and following surgery.

The prevention of arteriosclerosis is a much more difficult problem, as our knowledge of its production is based more on theory than on facts. Overstrain in hypertension, as suggested by Doctor Adami, is probably a definite factor. We know, however, that, as Doctor Evans has stated, arteriosclerosis may be general or local and be accompanied by either a normal or high blood pressure. In this last group, chronic infection seems to play a leading rôle. Heredity certainly is a large factor in the production of early and progressive changes in the vessel walls. The incidence of coronary disease can only be lessened by preventive measures.



EUGENE S. KILGORE, M. D. (490 Post Street, San Francisco).—The value of the authors' contribution is in their clear and authoritative portrayal of the essential pathology of coronary disease—with all its baffling

aspects to the practitioner who desires to do something about it. There is much to be done for patients with acute coronary occlusion (this I have already discussed in CALIFORNIA AND WESTERN MEDICINE, December 1932, page 393, and several facts are now known about the more important question of prophylaxis. We can even write some excellent prescriptions for the prevention of arteriosclerosis including coronary disease, but it will be a long time before our civilization provides adequate means for dispensing them. By far the most important is to choose better ancestors. This probably covers 90 per cent of the problem, and the remaining 10 per cent has to do mainly with moderation in eating and avoidance of the over strenuous life. Syphilis and other infections, though damaging enough in other ways, have little to do with this particular condition. Tobacco occasionally precipitates symptoms from already diseased arteries, but its rôle as a direct cause of arterial degeneration is small if it exists at all. Alcohol is unimportant in this connection. Another possibility in the prophylaxis of the thrombotic vascular accidents is the lessening of blood coagulability. A diet for this purpose has been suggested, but the subject deserves further study.

THE LURE OF MEDICAL HISTORY*

NICOLAI LEONICENI (LEONICENUS)†

By FELIX CUNHA, M. D.
San Francisco

"PUSTULÆ in obscenis partibus orientes, quæ postea per totum corpus, ac præcipue in facie, cum dolore se dispergunt."

Translation.—"An eruption originating in the private parts, which later spreads throughout the body, to the face especially, accompanied with pain."

These few lines were written in 1497 by Nicolaus Leonicensus, 1428-1524, A. D., a physician of Vicenza, and constitute one of the earliest descriptions of syphilis. Although brief, it is to the point, and while considerable has been added to the description since then, it stands in medical annals as one of the first observations.

At that time, 1497, considerable controversy existed in Europe as to the origin of syphilis and its appearance in Europe, and the battle waxed furious. The Italians called it the "French disease" and the French called it the "Neapolitan disease" and traced its first appearance to the sailors of Columbus after they had returned from their voyage of discovery. As can be seen from the accompanying title page, Leonicensus writes under the heading: "Vicenti de epidemia quam Itali morbum gallicum, Galli vero Neapolitanum vocant."

Leonicensus was one of the first of the great medical humanists who were active immediately

*A Twenty-five Years Ago column, made up of excerpts from the official journal of the California Medical Association of twenty-five years ago, is printed in each issue of California and Western Medicine. The column is one of the regular features of the Miscellany Department of California and Western Medicine, and its page number will be found on the front cover index.

† From author's collection of medical incunabulæ and old medical books.

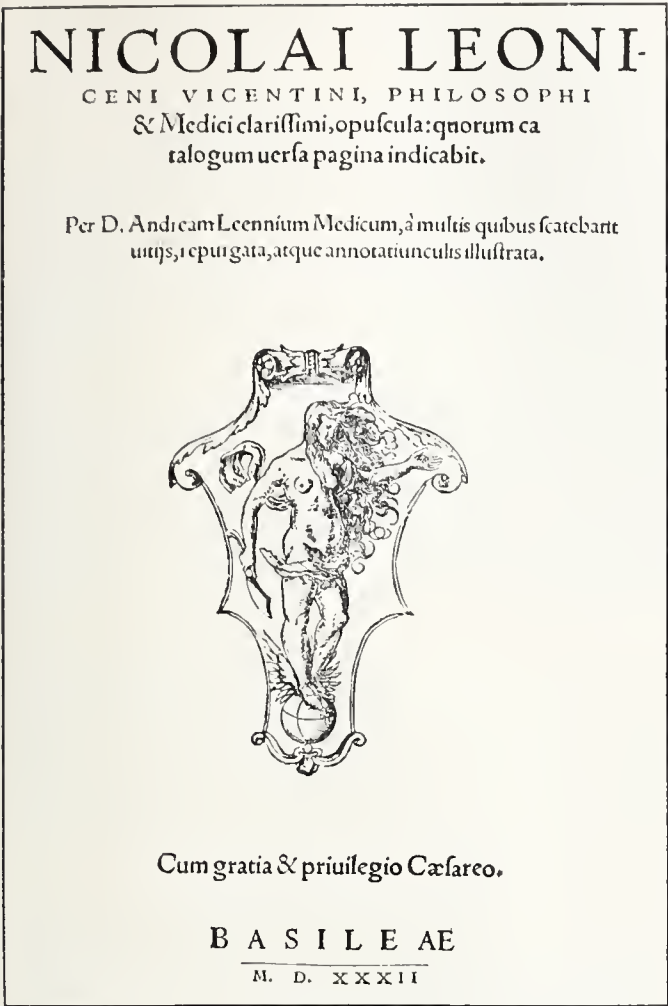
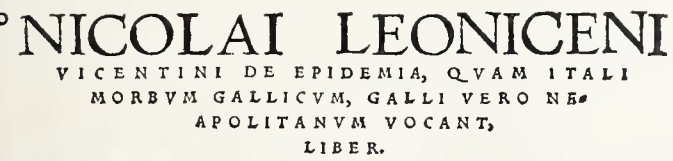


Fig. 1.—Title page.

following the invention of printing. Not much was known of him as a physician or as a man. He made no discoveries in medicine, neither was he known for any great or dramatic cures; throughout the greater part of his life he did not even practice medicine but lived as a hermit in Ferrara. As a scholar, however, he was admitted to be one of the best of his time, thoroughly trained in the Latin tongue and most distinguished for his knowledge of secular literature.

To Leonicenius the medical world is indebted



Novo Italiae aduenisse morbos prioribus seculis ignoratos antiqua ætas credit. Siquidem Plinius uir eruditissimus, non modo Italiae, sed uniuersae ferè Europæ lichenas ante Claudij principatum incognitos fuisse testatur uigesimo sexto de Historia naturali libro. Ego uero de alijs Europæ partibus non planè habeo statum quid sentiam. Illud pro certo affirmare auium, multis antequàm Claudius imperaret annis, lichenas fuisse Græcis familiares, quàm Hippocrates auctor græcus uerissimus cum multis alijs in locis, tum præsertim in tertia particula Aphorismorum, in morborum æstiuorum mentione, lichenum cõmeminit; ut mihi magis fiat uerisimile, uexasse id malum etiam Italiam, quamuis forè longo temporum intervallo ante Claudium, sed nondum Romano imperio ad exteras nationes præpagato, atq; ideo minus à græcis medicis Roma frequentata, defuisse eidem non oim nomenclatores. Idcirco donec sine nomine perfluit, fuisse interim obscuriorẽ, sicui postea Claudio imperante, iam Græcis artibus ac præcipue medicina uigente in ciuitate, lichenas atq; mentigram uocitantes fecere illustriorẽ. Simile quoddã nostris hoc æuo accidit

Fig. 2.—Title page of Nicolai Leonici's description.

for a clearer knowledge of botany through his translation of Pliny's Natural History and the correction of many errors occurring in Pliny's descriptions. This was a dangerous procedure in those days, and it was no mean feat to challenge or dispute the teachings of one who was looked upon as almost a deity along with Galen and Aristotle. It made for Leonicenius many enemies and brought much verbal and written abuse upon him, but it laid the foundation or cleared the way for the school of famous German botanists who sprang up at the German universities a generation later. The translation and correction of Pliny was published in Basle in 1492 and was entitled "De Plinii et aliorum medicorum erroribus liber." It is said that the amount of abuse poured upon Leonicenius at that time may have influenced him and may account for the meagerness of his writings later.

Historians record that Leonicenius did more to push medicine ahead, to shake it out of the rut it had been in for many years, than any other physician of the fifteenth century. His other contributions were a famous translation of the Aphorisms of Hippocrates, and in the year of his death, 1524, he had practically completed a translation of the entire works of Galen.

Leonicenius died at the age of ninety-six. It is not recorded whether he attributed his old age to abstinence from wine, etc., but it is recorded that he attributed his health to freedom of thought and action, and that he boasted of having arrived at manhood still chaste, which was a considerable boast in the fifteenth century. It is said, however, that, despite his living to this great age, he was very frail and was subject to epileptic seizures.

He had a profound influence upon students associated with him and imbued all of them with a desire to promulgate the New Learning. He gave to the medical men of his time, in their own language and in printed form, the teachings of the old masters. His works were thus available for translation into modern languages. His most famous pupil was Thomas Linacre, to whom he entrusted many translations. This was the same Thomas Linacre who in 1518 founded the Royal College of Physicians in London, still in existence.

At different times in his life Leonicenius was professor of medicine in Padua, Bologna, and Ferrara, but these intervals were short. Copies of some of his works exist in every large collection of old medical books and incunabula. Only a few years ago one of the largest and best collections in America was being shown to a visiting collector, who commented on there being no volume of Leonicenius in it.

A plate here shown reproduces the frontispiece of a book published in Basle in 1532 by the author, Andrean Leennium. The quotation is taken from Leonicenius' book, "De Morbo Gallico."

CLINICAL NOTES AND CASE REPORTS

PEPTIC ULCER*

IN A PATIENT, AGE NINETY-SIX

By GARNETT CHENEY, M. D.

AND

L. H. GARLAND, M. D.

San Francisco

PEPTIC ULCERS in aged people are not very common. In Hurst's series of gastric ulcers in males (Barford: New Lodge Clinic) the average age at onset was forty-five, and the oldest patient seen was seventy-three. Friedenwald (Trans. Assn. Am. Phys., XXVIII) reports 0.3 per cent of peptic ulcers after seventy. The oldest patient in a series reported by Calwell (B. M. J., 1907) was sixty-seven. However, Bolton ("Ulcer of the Stomach," 1913) mentions a case reported by Eppinger in a patient of one hundred and twenty ("Prager Vierteljahrsch," CXVI). Provided the latter gentleman's memory can be trusted, this must be the oldest case on record. As we had an opportunity for fairly complete clinical and roentgenological studies on a patient aged ninety-six, and, finally, an autopsy examination, we thought the accompanying case worth reporting.

REPORT OF CASE

In October, 1928, a Swiss sailor, ninety-six years of age, reported to the hospital complaining of pains in his left leg. The family history was unimportant. He recalled no serious illnesses except typhoid at the age of eighteen. He had been put on a diet for arthritis for ten years, which was apparently free of meat and protein vegetables. He also stated that at times he had some discomfort in his stomach, but no pain and no real distress.

Present Illness.—After entering the hospital the patient began to complain of regurgitation of sour fluid and discomfort in his stomach with occasional pains coming on about three hours after meals. These symptoms had been present on and off for ten months. He had no severe pains and no vomiting, but felt that his digestion was poor. He had never vomited any blood, and his bowels had been regular and the stools normal.

Physical Examination.—He was very alert mentally for his age, but showed marked arteriosclerosis. Many of his teeth were carious. The abdomen was relaxed, but there was marked tenderness in the epigastric region. No mass was palpable, but peristaltic waves were evident in the epigastrium at times. Otherwise nothing unusual was made out.

Laboratory Examination.—Blood count and urinalysis were normal. The stool was not remarkable. Three gastric test-meals were done, using both alcohol and histamin as stimulants. The free acidity in the fasting contents reached 62 degrees, and the total 73 degrees. The highest acidity thirty minutes after the alcohol test-meal was 35 degrees free acidity, and 50 degrees total acidity. After histamin the free acidity rose to 87 degrees, and the total to 96 degrees. The volumes were large after the first gastric analysis, reaching a total of 700 cubic centimeters, which contained food

remnants. No bile and no blood were present, and the ferments (pepsin and rennin) were present in normal amount.

Roentgen Examination.—(Gastro-intestinal series):

August 16, 1929. The chest is negative. The stomach is dilated, slightly low in position and contains a large semifluid nonopaque residue. After giving some barium, the lesser curvature near the antrum is seen to be irregular. Since the patient is not well enough to permit detailed examination, the exact nature of this irregularity cannot be fully studied. At six hours there is a gastric residue of about 70 per cent; the rest of the barium lies in the lower ileum. Conclusion: Partial pyloric obstruction; probable ulcerative lesion close to the pylorus.

September 23, 1929. The stomach does not appear dilated at the present time, but a small amount of fluid is present. As before, peristalsis is poor and emptying is slow. The pyloric zone is a little wider at this time and the irregularity of the lesser curvature less evident. At six hours there is a moderate residue present. Conclusion: Ulcerative lesion close to the pylorus.

Course.—The patient was put on a Sippy regimen and gradually became free of symptoms and was surprisingly comfortable, although gastric analysis and further roentgen examination showed that his pyloric obstruction was not very much altered. He gained weight and after six months he left the hospital ward and became an ambulatory patient of the institution. He remained on a modified Sippy diet and had no gastric complaints.

Six months before his last hospital entry he was reported to have had a right hemiplegia of sudden onset, which cleared up quite rapidly. Six months later he showed only slight evidences of residual paralysis, but he reentered the hospital with a cold. He complained then of difficulty of keeping his food down, and had occasional vomiting. He developed a bronchopneumonia; vomiting became more marked and his general condition was too poor to warrant special investigations. He died of bronchopneumonia ten days after hospital entry.

Clinical Diagnosis.—(1) Arteriosclerosis. (2) Peptic ulcer with pyloric obstruction. (3) Bronchopneumonia, terminal.

Autopsy Abstract.—The postmortem findings confirmed the clinical diagnoses. The chief point of interest was the lesion in the stomach.

There is a punched-out ulcer on the posterior wall of the stomach, 4 centimeters proximal to the pylorus; the ulcer is penetrating, and measures 1.0 by 1.5 centimeters. Microscopic examination reveals no evidence of malignancy. There is a small membranous nodule about 2 centimeters away from the border of the ulcer; this is a lipoma on section.

210 Post Street.

450 Sutter Street.

REMOVAL OF TATTOO MARKS

REPORT OF CASE

By NELSON PAUL ANDERSON, M. D.

Los Angeles

THE following case is presented simply to indicate what type of result may be expected in the removal of a tattoo mark.

Miss A. W., age twenty-three, had had a tattoo mark on the left upper arm for five years (Fig. 1) which she desired to have removed.

The method employed was that of Variot. This technique, fully described by Shie,¹ consists in introducing into the design, as if a tattooing operation were being done, a 50 per cent solution of tannic acid in

* From the Stanford University Service, the Laguna Honda Home Infirmary, San Francisco.

* Read before the San Francisco County Medical Society.

water. The tannic acid solution must be freshly prepared. The tattooing should always be done through the tannic acid solution and the tattoo needle carried well into the corium, where the pigment is situated. The simplest tattoo needle consists of one or several cambric needles which may be imbedded in a cork. After the design has been thoroughly tattooed, the excess tannic acid is removed by washing with cold water, and then a stick of pure silver nitrate is rubbed vigorously into the treated area, following which a sterile dry dressing is applied. Fourteen to eighteen days later a dry slough is removed, usually in one piece. This contains the epidermis, the tannate of silver in the corium, and the tattoo pigment. The treated area is now covered with a thin new layer of epidermis, which remains pink for a time but gradually takes on the color of the surrounding skin.

The results are good in most cases. Although some scarring usually occurs, it is of a depressed atrophic type. One would hesitate, however, to attempt this procedure on any person who had a keloidal tendency. I have seen several instances where the resultant keloid scar was very disfiguring.

The result in the case presented (Fig. 2) is not perfect, but the patient is able to render the scar quite inconspicuous by the use of a powder base and powder.

This method may also be used in the removal of old gun-powder burns, or accidental tattooing as often occurs from cinders and dirt in automobile and other street accidents.

2007 Wilshire Boulevard.

REFERENCE

1. Shie, M. D.: A Study of Tattooing and Methods of Its Removal, *J. A. M. A.*, 90:94 (Jan. 14), 1928.

MESENTERIC THROMBOSIS

REPORT OF CASE

By FREDERICK G. NIEMAND, M. D.
San Francisco

THE difficulty of diagnosing vascular lesions of the mesenteric vessels is well known. Alvarez, in Tice's "Practice of Medicine," cites 360 cases collected by Trotter in which only thirteen were recognized before operation or autopsy. The case reported here is presented in view of the difficulty of recognition and the problem of differential diagnosis it gives.

REPORT OF CASE

The patient, C. W., a 68-year-old female, was first seen on May 20, 1932. An hour previously she had fallen, striking her right shoulder, and since then it had pained her considerably. Fracture of the head of the humerus was suspected, and corroborated by radiography. The arm was placed in fixation and seemed to be progressing well until about ten days later when she was suddenly seized with pain in the epigastrium, nausea and vomiting, followed by rapidly developing symptoms of shock. The pain in the epigastrium was of a steady, intense nature, unrelieved by ordinary



Fig. 1.—Tattoo marks before removal.



Fig. 2.—Tattoo marks after removal.

medication but partially controlled by morphin. Pain was also soon apparent in the left lower quadrant which to the patient seemed as intense as that in the epigastrium. She was considerably nauseated and vomited occasionally.

Examination showed the patient to be pallid, the skin moist, breathing shallow, pulse rapid, thready and irregular, the extremities cold and cyanotic. Nothing significant was found in the lungs; her heart was somewhat enlarged; the abdomen was rigid, distended, tender to pressure, particularly in the epigastrium and left lower quadrant. No peristalsis could be heard on auscultation. The patient had not had a bowel movement in the last twelve hours.

The blood pressure was 117/75. Her white blood count was 23,200 with 93 per cent polymorphonuclear cells. Urinalysis revealed 3.3 per cent albumin with forty to fifty pus cells and twenty to thirty hyaline casts per high power field.

At this time an enema was given, with no result. This was repeated again in two hours and no return was noted. Neither of these enemas was accompanied by any flatus. Morphin sulphate, one-fourth grain, was given every four hours with one cubic centimeter of digalen. One hundred cubic centimeters of 25 per cent glucose were given intravenously twice daily, and hot compresses were applied continually to the abdomen.

The next day the temperature of the patient rose to 103 degrees; her pulse became still more irregular and weak; her breathing very shallow; the skin clammy and her general condition poor. She expired shortly afterward.

Necropsy.—Necropsy, performed by Dr. A. M. Moody, revealed a thrombosis of the main branch of the superior mesenteric artery throughout its entire length, localized peritonitis and gangrene of the jejunum and upper ileum. At the area of gangrene the coils of the intestine were plastered together, causing an adynamic ileus and partial obstruction.

COMMENT

This case presents an interesting study in differential diagnosis. French, in "Differential Diagnosis," comments on the similarity that these may have to peritonitis; while Osler, in "Modern Medicine," states that in some cases "the symptoms are practically those of an acute intestinal obstruction caused by the paralytic condition of the affected portion of the bowel." It is indeed necessary that despite the comparative rarity of

this lesion that it be kept in mind when considering the acute abdomen.

In our differential diagnosis of the present case the possibilities that seemed most likely were:

Coronary thrombosis because of the enlarged heart, auricular fibrillation, epigastric pain, shock, fever, and elevated white blood count. However, the site of the pain was atypical and it was difficult to correlate the obstipation, distention, rigidity and lower abdominal pain when that appeared.

Intestinal obstruction was thought of because of the pain, absence of peristalsis and bowel movements, the abdominal distention, vomiting, and normal temperature at the onset. Here again it soon became difficult to maintain this diagnosis because of the elevated white count, fever, nature of the pain, and the tenderness, though some of these symptoms might be explained by a gangrenous bowel following obstruction.

Mesenteric thrombosis, another possibility, was suggested by the past traumatic injury, the pain and shock. The type of pain, the absence of the characteristic bloody stools, did not seem to support this diagnosis, whereas the auricular fibrillation drew one's attention to the cardiac possibilities again.

CONCLUSIONS

A case report is presented of mesenteric thrombosis and the necessity of keeping in mind mesenteric vascular accidents when examining the acute abdomen emphasized, because so few of these cases are recognized before autopsy or operation.

450 Sutter Street.

DERMATOLOGIC DIAGNOSIS*

By MOSES SCHOLTZ, M. D.
Los Angeles

III

SCABIES

SCABIES is commonly regarded as the simplest diagnostic problem. This is true only in the severe and fully developed cases. In early and mild cases, such as are seen in cleanly people, scabies is one of the most common diagnostic pitfalls and is often missed. Its morphologic traits are:

1. Multiple minute noninflammatory top scratched papules.
2. Located preferentially on flexor surfaces, such as interdigital spaces of the hands, breast, abdomen, inner aspects of thighs, penis, also gluteal regions.
3. Papules often seen as burrows of "runs"—greyish blackish dotted lines often broken up by scratching.
4. Scabies papules often show secondary impetiginous crusts, but retain their discrete character.
5. In mild cases diagnosis can be made on the first two traits.

NEUROTIC EXCORIATIONS

For practical purposes of differential diagnosis a few other dermatoses which cause intense itching, present a similar general picture and are often confused with scabies are considered. These are neurotic excoriations, insect bites, pediculosis corporis, and dermatitis herpetiformis. Neurotic

excoriations is a fairly common condition, particularly in women. Its morphologic characteristics are:

1. Irregularly shaped, sharply defined crusty lesions developing suddenly and healing up spontaneously.
2. The frequency of their appearance is directly proportionate to the nervous instability and emotional stress of the patient.
3. They are commonly located on the face, upper and lower limbs, always in a location accessible to the hands of the patient.
4. Mostly symmetrically.
5. The lesions often leave persistent pigmentation but seldom scar.

INSECT BITES

Skin lesions caused by insect bites are of sufficient practical importance to be known morphologically. Strange to say, they are invariably mistaken for food rash, nervous skin eruptions, etc. Yet their morphologic type is constant and typical enough to be pathognomonic. In fact it is unique and is not observed in other dermatoses. The insect-bite lesion occurs as a large urticarial edematous papule pierced in the center showing the "stileto," the site of the entrance of the insect sting.

PEDICULOSIS CORPORIS

Differential morphologic traits:

1. Excoriations and finger-marks on the shoulder blades, belt line, and other parts of the body coming in contact with the seams of the clothing.
2. Blue, erythematous spots and persistent pigmentations.
3. Occurs mostly in uncleanly and poor people.
4. Secondary urticarial and pyogenic lesions often observed.
5. Parasites (lice) found in the seams of the clothing.
6. Itching worse at night.

DERMATITIS HERPETIFORMIS

This very important dermatosis due to systemic toxins is not sufficiently known morphologically. Its differential traits are:

1. Lesions—Papular or vesicular, inflammatory, discrete, herpetically grouped in clusters.
2. Recurring in acute attacks; for many years persistent.
3. Located often symmetrically on the trunk and limbs.
4. Persistent pigmentation follows; develops at the site of old lesions.
5. Blood shows high eosinophilia.
6. Intense itching in paroxysms both day and night.

ULCERS

Ulcers are very common skin lesions of manifold etiology. The most important clinical varieties to the general practitioner are those caused by syphilis, varicose ulcers, and epitheliomata.

Syphilis:

1. Located on any part of the leg, high or low, often bilateral.
2. Small hyperemic zone of raw ham color.
3. Punched out, sharply defined borders, and sloping edges.
4. Dirty, greasy base with viscid purulent discharge and heavy greenish crusts.
5. Serpiginous outline.
6. Starts as soft, subcutaneous, gummatous tumor, comparatively rapid development—in a few weeks.
7. Tendency to produce soft atrophic kidney-shaped scars.
8. History and other signs of syphilis.

* Part I of this paper was printed in December California and Western Medicine, page 375; Part II in January California and Western Medicine, page 39.

Varicose Ulcers:

1. Located in the lower third of the leg.
2. Bluish, cyanotic color, diffuse large hyperemic surrounding zone and often secondary eczema.
3. Irregularly shaped, sluggish granulating surface, copious seropurulent discharge.
4. No tendency to crusting.
5. Very slow development—months and years.
6. No tendency to healing or scarring but to pigmentation.
7. Marked varices and evidence of congested venous circulation and at times edema.
8. Syphilis may or may not be coexistent.

Epitheliomatous Ulcer:

1. Bright red or yellowish color.
2. Sharply defined, infiltrated, of wooden hardness, rolled borders.
3. No surrounding inflammatory zone.
4. Crater-like base, granulating.
5. Friable, easily bleeding base with serosanguinous discharge.
6. Oval or irregular shape.
7. Very slow development, starts at advanced age.
8. No tendency to healing or scarring.
9. Common site on the forehead, cheeks, nose, and lips.
10. In early precancerous stage lesions appear as brown or grayish scaly nonitchy spots or patches which scale off and recur, gradually breaking down.

ALOPECIAS

Alopecias of the scalp or the bearded region are one of the commonest skin disorders, are of multiple etiology and rather confusing morphology. The most important and common types of alopecia are: premature (*i. e.*, seborrheic), areata, and mycotic (*Tinea trichophytica*). The knowledge of their morphology is absolutely necessary for an intelligent diagnosis.

Seborrheic Alopecia:

1. Occurs in young adults.
2. Slow progressing from year to year.
3. Starts symmetrically at the temples and slowly creeps backward.
4. There are no hair stumps or broken hair.
5. Scalp is often seborrheic and oily.
6. Hair comes out as a whole with a dried-up atrophied root bulb.
7. There are no scaly deposits, ulcerations or scars on the scalp.

Alopecia Areata:

1. Develops acutely; occurs at any age.
2. Develops acutely after a fright or nervous shock.
3. Scalp is perfectly clean and healthy looking; no scaly or oily deposit.
4. Many broken hairs and hair-stumps in the shape of exclamation points.
5. May start on any part of the scalp in single or multiple patches.
6. Patches are sharply defined of round or irregular freakish shape.
7. The hair retains its normal gloss and luster.

Mycotic Alopecia (Tinea trichophytica):

1. Occurs, as a rule, in children under twelve.
2. Patches well defined, round or circinate.
3. Develops gradually, often in several children of the same family.
4. Dry, scaly, dusty deposit and detritus, at times follicular pustules and abscesses.
5. Hair stumps and broken hair.
6. Affected hair looks dry, lusterless and brittle.
7. At times boggy, suppurating, nodular tumors (kerion type).
8. Fallen hair presents at the end dry or glairy purulent deposits and trichophyton spores and mycelia can be demonstrated microscopically and cultured.

Luetic Alopecias:

A. Early.

1. Usually in young adults.
2. Multiple patches of moth-eaten variety.
3. The whole scalp looks dull, dry, lifeless.
4. The patient often looks anemic and toxic.
5. Develops rather acutely simultaneously over the entire scalp.
6. No scales or pustules.
7. Other associated symptoms of syphilis.

B. Late alopecia of tertiary period is a result of the absorption of the gummata on the scalp and presents soft atrophic serpiginous scars.

DRUG ERUPTIONS

Drugs, both external and internal, are an extremely frequent cause of skin rashes.

In the former the skin reactions do not present specific morphologic traits and appear as that common undifferentiated pictorial entity of dermatitis, *i. e.*, eczema. The history is the only thing that can identify the offending agent in these cases.

Skin reactions from the internal use of drugs, called dermatitis medicamentosa, present a great variety of morphologic types.

Commonly they occur as erythematous, scarlatinoid, macular, morbilliform, bullous or lichenoid, exfoliating dermatitis types. Among characteristic drug eruptions of practical importance should be remembered the following:

Iodid rash: Acneiform in early stage; in severe cases bullous type; pemphigoid.

Bromids: Early lesions also acneiform; in severe cases granulomatous, strongly simulating syphilitic gummata or blastomycosis.

Arsenic: In acute intoxication—zoster types, generalized exfoliating dermatitis, lichenoid, bullous. In chronic intoxication—punctate keratoses and pigmentations.

Phenolphthalein: Produces an eruption so characteristic as to be pathognomonic—purplish, at times slate-blackish in color, round persistent patches; in severe cases bullous lesions in the mouth.

Antipyrin, luminal, and quinin may produce scarlatinoid, morbilliform erythematata and bullous lesions in the mouth.

CONCLUSION

This concludes the brief portrayal of the salient morphologic traits characteristic for various dermatoses most frequently occurring in general practice. This necessarily sketchy presentation offers a key to a diagnostic orientation in the clinical problems of dermatologic diagnosis that may come before a general practitioner in his daily work. However, to insure definite and practical results a clinician must not only thoroughly digest and assimilate the above outlined general basic principles of differential technique, classifying his individual case on the basis of the suggested tables, but, above all, must cultivate his independent analytical reasoning in utilizing these tables. In the beginning I would suggest to enumerate morphologic traits and evaluate differential points in writing for the purpose of visualizing diagnosis. With the repetition of the practice, I believe the practitioner can readily develop the capacity of intelligent diagnosis of the dermatologic cases coming under his observation.

715 Wilshire Medical Building.

BEDSIDE MEDICINE FOR BEDSIDE DOCTORS

An Open Forum for brief discussions of the workaday problems of the bedside doctor. Suggestions of subjects for discussions invited.

POSTOPERATIVE DEXTROSE—THE ABUSE OF REPEATED UNCHECKED INTRAVENOUS INJECTIONS

ROBERT DAY, M. D. (1930 Wilshire Boulevard, Los Angeles).—A great boon to surgical patients has been the judicious use of isotonic salt solutions and dextrose intravenously and sometimes blood transfusion. But one wonders just how scientifically, in a certain minority of cases, dextrose has been employed. There are definite indications for the administration of dextrose just as there is for blood transfusion. One would not ordinarily repeat blood transfusion without a blood count and hemoglobin determination. Why, then, the routine of frequently repeated large amounts of dextrose intravenously without a check on the blood sugar? Following major operations, we have been greatly surprised to sometimes find the blood sugar over 300 milligrams, twelve to eighteen hours after the last intravenous administration. I am referring, of course, to nondiabetic patients. It is reasonable to suppose that following a severe operation, with a considerably lowered blood pressure and a certain amount of shock, many of the hormones, including those classed as internal secretions, probably both adrenalin and insulin, are markedly diminished. It is logical and rational to assume that the glycogenic function of the liver and the insulin manufacturing power of the pancreas are lowered. In other words, less dextrose can be utilized. This is an agreement with the clinical and laboratory facts.

When enough, or a slight excess, of dextrose is administered, the patient is frequently still dehydrated, and needs physiologic salt solution instead of more dextrose and water. Dextrose, which is not utilized, throws an extra burden on the kidneys. If physiologic salt solution is substituted, it tends to remain in the system, where it is needed to balance the circulation. For example, if it is considered necessary to inject fluid within one or two hours after the operation, physiologic salt solution either in the vein or by hypodermoclysis answers every purpose. Then if another injection seems indicated, say on the evening of the same day, why not give salt solution plus a reasonable amount of dextrose, not to exceed twenty-five grams. Fluid intravenously may be repeated during the early hours of the following morning if thought indicated by the clinical condition of the patient, employing either physiologic salt solution or perhaps the special solution described elsewhere in this discussion. Further administration of dextrose intravenously should not be done without ascertaining the sugar content of the blood.

Another real danger in a certain percentage of patients is that of pulmonary edema, especially when deficient kidney function is present. Postoperatively, patients are frequently given dextrose for fear of anuria. Certainly one should not subject patients to serious operations of election without preoperative data on the state of the kidneys; and if the kidneys are functioning normally, little fear of anuria need exist. If the output of water and excretory products is deficient, it is usually a prerenal condition but may be postrenal; in either case, dextrose intravenously will be of no avail and is apt to prove harmful. If insufficiency (essentially renal) exists, dextrose is in itself of doubtful value.

Occasionally there is the menace of overtaxing an already weakened heart by too much dextrose solution, or indeed any type of fluid in excess. Careful clinical observation will enable the surgeon and internist to "spot" such cases.

For several years we have employed routinely the following solution with much satisfaction:

	Grams
Sodium chlorid	7½
Magnesium sulphate	1
Dextrose	25
Double-distilled water, freshly prepared....	1000

It is nearly isotonic aside from the dextrose content. The relatively small quantity of dextrose is sufficient (but not too large to go unutilized). The small quantity of magnesium sulphate is a sedative to the central nervous system (at least theoretically) and is perhaps slightly diuretic. At any rate, magnesium is a body constituent, is harmless, and helps bring the solution nearer an isotonic state. We do not for a moment assume that our solution represents the optimum proportions; but we do believe that primarily the patient needs physiologic salt solution, plus whatever dextrose he can utilize, and obviously, sometimes a blood transfusion. If reactions should occur, they are due to rubber tubing, impure chemicals, the distilled water, or wrong methods of sterilization. The so-called "pyrogenic" content of improperly distilled water, or that which is not fresh, is something to be avoided always.

Employment of the above solution has been followed by singularly few reactions in our hands over a period of eight years, during which time we have used it almost routinely after operations, when any such intravenously administered solution was deemed desirable. It has the advantage of overcoming dehydration as well as supplying all the dextrose that probably can be utilized. It should not be repeated indiscriminately without a blood-sugar determination. If the blood sugar is high, half of the theoretical amount of insulin

needed to oxidize the excess may be given. Formerly we prepared the solution ourselves, absolutely fresh for each administration; but for several months past, a commercial firm has been putting up our solutions in liter flasks, sterilizing it in vacuo. We have found that this solution as prepared and sterilized in vacuo, keeps indefinitely, and such easily obtainable and inexpensive stock flasks have resulted in a great convenience. They are marketed in containers adapted especially for intravenous administration. It is quite as essential when employing intravenous injections of physiological salt solutions, to observe the same meticulous care as with dextrose solutions. The distilled water and rubber tubing as well as the chemicals should be the best obtainable and the preparation and sterilization should be directed by experts. In the final analysis, it is far less expensive, much more convenient, and an inestimable saving of time and energy and infinitely safer to use solutions put up by reliable, experienced firms. Fortunately the Pacific Coast is a leader in this respect. On the other hand, solutions prepared in hospitals are not infrequently improperly compounded and productive of reactions because dependence is placed on relatively inexperienced persons, not thoroughly trained in every phase of this work.

If only twenty-five grams is used it answers every useful purpose in an overwhelming majority of cases and can with safety be administered rapidly, thereby obviating the harm to the patient's liver and other organs by the intravenous injections of cool fluid in a patient with shock or otherwise critically ill. The commonly observed procedure of taking forty-five minutes for an intravenous injection and hence injecting several hundred cubic centimeters of cool fluid should be condemned. Placing a hot-water bag alongside the container is merely a gesture. Five to eight hundred cubic centimeters of fluid, either physiologic salt, Ringer's solution, or the one described above, may be safely administered in fifteen minutes, and if longer time is consumed it will probably reach the blood stream at much too low a temperature.

* * *

FRED H. KRUSE, M. D. (384 Post Street, San Francisco).—On numerous occasions, when following the postoperative course of certain of my patients, I have marveled at the freedom with which the surgeon has poured fluids into the tissues, either intravenously or under the skin. My first concern under these circumstances has been the ability of the cardiorenal apparatus to carry the load. Usually I have been agreeably surprised in cases with essentially vascular lesions at the readiness with which this has been accomplished without cardiac failure, pulmonary edema or generalized tissue edema. It must be admitted that the surgeon has taught the internist a lesson both as to the advantages of a considerable fluid intake postoperatively, and the ability of the average patient to handle it. That we cannot argue.

It does seem to me, however, that there has been a tendency to adopt a general procedure, which is left to the staff to administer, as per rule,

and a lack of discrimination in the individual case, both as to needs of fluid, salts, glucose, and as to knowledge of the circulatory and metabolic deficiencies of the individual. When the fluid intake reaches 3000 cubic centimeters in any given case, all those responsible should be on the alert to detect any accumulation in the tissues and any sign of myocardial failure. Furthermore, an accurate chart should be kept from the start, of the output of fluid as well as the intake, and it has generally seemed inadvisable to me to have more than 1500 to 2000 cubic centimeters of the total given by vein, the balance, therefore, being made up by hypodermoclysis and rectal infusion.

In going beyond 3000 cubic centimeters of fluid intake there should be definite evidence of dehydration, particularly induced by some such causes as vomiting, sweating, excessive diuresis, bowel elimination, or hemorrhage. I would say, therefore, that the first essential is the quantity of fluid required in the case at hand, and the ability of the individual to move it along without embarrassment.

In a failing heart I do not believe a glucose solution *per se* causes embarrassment (as relatively high blood sugar is an advantage to the heart muscle), but the fluid volume and chance reactions may decidedly do so.

In respect to the content of fluids administered, I am quite in accord with the general opinion expressed in this discussion—a salt solution of proper proportions should be our chief reliance. In the University of California Hospital we are using mainly Ringer's solution, as follows:

	Grams
Sodium chlorid.....	0.86
Potassium chlorid	0.042 per 100 c. c.
Calcium chlorid	0.024
	<hr/>
	0.926

Having met the first requirement of postoperative care, supplying adequate fluids and preventing dehydration, the next requisite is the prevention of acidosis and the giving of sustenance in some form. Intravenous glucose has all the advantages in this respect, but on account of its very merits has been most abused and often dangerously used. The surgeon has paid no attention as a rule to the blood sugar and considers a glycosuria of no consequence. Since intravenous glucose is usually given only two or three times in the average case, this attitude does no particular harm, but in chronic cases, where more prolonged use is desirable, the patient will be more damaged than helped by the treatment.

The average individual can assimilate seventy-five grams of sugar in the vein if given at the rate of twenty-five grams per half hour; there is then no spillover into the urine. Seven hundred and fifty cubic centimeters of 10 per cent glucose require one and a half hours to administer, and this must be kept warm. It would seem much more rational to give 500 cubic centimeters of 10 per cent glucose (fifty grams) once or twice a day, therefore (if indicated), and make up the necessary fluid balance by a Ringer's solution or some other form approximating a physiologic

salt solution. Most certainly the urine should be tested for sugar several times a day, and the blood sugar should be followed under these conditions, and they should indicate any further need for more glucose.

If there is recurring glycosuria and a blood sugar above 0.140 milligrams per 100 cubic centimeters blood, no more sugar should be given until these conditions are corrected.

* * *

BERTNARD SMITH, M.D. (1930 Wilshire Boulevard, Los Angeles).—Intravenous dextrose therapy requires primarily the use of a pure sugar dissolved in sterile distilled water and injected at a proper temperature and rate. The concentration of dextrose to be used must depend upon the amount of fluid that can be added safely to the blood stream, and is to be determined by the amount of dehydration that is present and on the ability of the cardiovascular system to carry the added fluid load. With careful technique in the preparation of the dextrose solution and in the injection, and good judgment as to the volume of fluid that can be safely introduced, intravenous dextrose therapy is a comparatively safe procedure at any concentration when the dextrose that is added to the blood stream can be normally utilized.

Under normal conditions the glucose value of the blood is maintained within a fairly narrow range throughout the twenty-four hours. The rate of oxidation and storage of glucose are in wonderful balance with the amounts of glucose that enter the blood stream from food and from glycogen. A decrease in the insulin-secreting function of the pancreas will cause an increase in blood sugar.

Likewise, an increase in the secretory functions of the thyroid and the suprarenals will result in a hyperglycemia that is similar to the inhibited pancreatic function. In the presence of a hyperglycemia that is due to functional disturbance of any tissue concerned in glucose metabolism, the addition of dextrose intravenously will only increase the functional handicap that is already present. Even when this functional defect is temporary the addition of dextrose directly to the blood stream will still further embarrass the function that is already overtaxed. In the presence of a hyperglycemia it would be the more rational therapy to use such measures as will increase glucose utilization and make use of the sugar that is already oversupplied to the blood, rather than to directly introduce more sugar. Even the introduction of dextrose plus insulin would usually appear rather unnecessary with an existing high blood sugar. Anesthesia, shock, infections, toxemias, ketosis, and various forms of acidosis may cause marked increase in blood sugar. Such hyperglycemias are due to some functional fault that disturbs the normal balance between glucose supply and glucose utilization. Such hyperglycemias are definite contraindications for intravenous dextrose therapy just as actually as is the high blood sugar of an uncontrolled diabetes.

Hypoglycemia may result either from a decrease in glucose supply or from an increase in power and rate of glucose utilization. In the presence

of a blood sugar value that is actually or functionally low, intravenous injection of dextrose is indicated when food cannot be taken by mouth or when the condition is of such seriousness as to require a more rapid and direct glucose supply to the blood stream. In the presence of a hypoglycemia it is possible to give dextrose by intravenous injection at such low concentration and slow rate as to stimulate insulin secretion. Severe symptoms of hyperinsulinism may follow such injections and result in critical respiratory or circulatory failure. Blood sugar analyses should be made after the dextrose injections, as well and before, in conditions of hypoglycemia.

Blood sugar analyses are of the greatest importance at all times when considering indications for intravenous injection of dextrose, and such analyses must be carefully interpreted before such therapy can be followed.

* * *

HENRY H. LISSNER, M.D. (727 West Seventh Street, Los Angeles).—Doctor Day's discussion is a timely one. From the clinical aspect, it presents the very interesting problem of the routine administration of a recommended therapy, which is as a rule done without thought or actual appreciation of what is being attempted with it. It has been my experience to watch surgeons in their postoperative treatment in a great many hospitals leave a blanket order for five per cent glucose by the Murphy drip, when this method of glucose administration has been proved by Pressman to be scientifically incorrect, in that instead of adding glucose to the blood stream it diminishes it. If one wishes to add water to the patient, per rectum particularly, it should be given in the form of plain tap water by the Murphy drip.

The same fault is to be found with the promiscuous administration of glucose intravenously, without checking up the blood sugar and without watching the urine for the spilling over or the production of a glycosuria. Here again the same faulty method is behind the constant administration of intravenous glucose. I have seen many cases in consultation where the surgeon was unaware that his patient had four per cent sugar in his urine, that the blood sugar was over 300, and that an acidosis was present. The failure to check up the blood sugar cannot be overstressed in any condition in which concentrated glucose solutions are administered by the venous route.

Again the flooding of the circulation by the administration of glucose solutions as such, or combined with saline, in amounts beyond the physiologic possibility of the individual to handle, is dangerous. It can produce acute pulmonary edema, as brought out by Doctor Day, in certain types of kidney disease, but it is also dangerous from the standpoint of overloading the right heart in myocardial degeneration and the allied conditions expressed by circulatory failure.

Clinically the increase of fluids in the blood stream may cause death which is usually ascribed to myocardial failure, when the actual cause was too much water. It must be remembered that it is rather difficult for the circulation postopera-

tively to handle anywhere from 3000 to 6000 cubic centimeters of saline introduced into the vein in a period of twenty-four hours. A better method would be to use hypodermoclysis or the Murphy drip of plain water. The solution recommended by Doctor Day seems to have a definite rationale. It obviates the danger of too much glucose on the one hand, but it must be born in mind, on the other, that too much of this same solution can be just as harmful, from the standpoint of water-logging the patient, as any other type of intravenous medication.

Milk and Water Problems Discussed at Washington Meetings.—A relatively new method of pasteurizing milk, known as the high-temperature, short-time process, was the subject of a report presented at the Washington meeting of the American Public Health Association. The milk is heated either by electricity or by hot water in equipment having special automatic temperature control to a temperature of 160 degrees Fahrenheit and held at that point for fifteen seconds or more.

After extensive tests by various health departments, this procedure is now in commercial use in some sections of the United States. For the past two years, the committee on milk supply of the Public Health Engineering Section of the association has studied the method in coöperation with the committee on milk sanitation of the Conference of State Sanitary Engineers. Their joint conclusions follow:

1. The operation of these high-temperature, short-time pasteurizers should not be difficult in the hands of intelligent operators, as they are relatively simple in construction and easy to clean and sterilize.
2. They are reliable, and are built for fixed, minimum holding periods which it would be difficult to change without deliberate fraud.
3. The pump-stop control operates effectively to stop the milk pump and the flow of milk in the event of a drop in temperature below a predetermined point.
4. Pasteurizers of this type are a dependable means of producing a safe milk of satisfactory marketable quality.

Many problems in the control of public water supplies were discussed at the Washington convention. In a paper on icing samples of water before shipment for bacteriological examination, it was reported that the number of *B. coli* in the water gradually decreased whether the sample was iced or uniced, whereas the total number of bacteria in the sample increased upon the storage of the sample. This increase was more marked in uniced samples, but is of little practical significance. . . .

Studies of swimming pool control in Detroit indicate that 0.5 p. p. m. residual chlorin may not be sufficient with heavy bathing loads. . . .

Preliminary results of comprehensive research in the chemistry of chlorination indicate that effectiveness of disinfection is determined by the oxidation potential existing in the treated water. This potential, in turn, is governed by the pH of the water, the concentration of active chlorin and other less important factors. The concentration of active chlorin is not measured by the intensity of color produced by the starch iodid or orthotolidin reagents, and hence these two tests do not measure the oxidation potential or the effectiveness of disinfection. . . .

The Number of Physicians in Russia.—Doctor Raducanu, a practicing physician in Russia, now on a holiday in Rumania, imparted the following information: The number of physicians in Russia is three times as much as it was before the war. Among 68,000 Russian physicians, 30,000 are women. The average income of

a physician is less than that of a specially qualified factory worker; there is very little private practice now, the normal positions being filled by appointments. Though the law strictly forbids the accumulation of positions, yet about 15,000 physicians have two positions and two incomes, and about 3,000 physicians have three and even more positions. For financial and social reasons, physicians do not go to the country, so there is an excess of physicians in cities, where the ratio of physicians to inhabitants is 17.6 to 10,000; in villages it is only 0.98. Only 3 per cent of physicians are members of the Communist party. This is attributable to the fact that only 9.5 per cent of the physicians originate from the working class. . . . —*Journal of the American Medical Association*, Vol. 99, No. 17.

Teaching Physical Culture to Physicians in Russia.—The education of physicians who specialize in physical culture has been reorganized in the Soviet Union. Since 1931, the theory and practice of physical training has been obligatory for all students at the medical institutes. Chairs of physical culture under the guidance of special professors have been created. The educational plan requires sixty hours' work in the first three years of study, including the principles of Soviet physical training, and forty-eight hours for the next two years of training in curative physical culture. Every six days, students have an hour of practice in athletics so that every student will be able to demonstrate the methods he uses. In 1932, faculties of physical culture were founded at the Moscow and Leningrad medical institutes. Physicians who graduate from such a faculty will become specialists in physical culture. During their five years' training they study, in addition to medicine and general science, physical and social environment. The specialist in physical culture must know the theory and practice of physical culture, always remembering its biologic, educational and social significance. He must take an active part in the organization of sport in all its aspects everywhere at school, in industry and in the towns. He must be well acquainted with rational nutrition, so as to be able to advise sportsmen in training. He must be accustomed to the methodology of physical education and development, and thoroughly know anthropometry, physiology, hygiene and clinical methods, so that he can take part in scientific work. In many other medical schools, physical culture as a discipline is introduced, so that every physician will be acquainted with the program of contemporary physical culture. The work of a physician specializing in physical culture consists principally in organizing physical culture and in the methodical development and instruction of medical men. At present, there are in the Soviet Union about 420 physicians specializing in physical culture and 3300 other physicians who have received special training in physical culture. For the three millions of people engaged in athletics, this number is small. That is why the increase in the number of physicians acquainted with medical physical culture is welcomed.—*Russia News Letter*.

Use of Local Hospitals for Veterans.—The *Saturday Evening Post* in an editorial, January 7, recommended that the government use vacant accommodations in local hospitals for the care of war veterans. The editorial called attention to the fact that physicians and hospitals are now under greater pressure than ever before, with more calls for free service and fewer paying patients to offset their cost, yet more special hospitals are being built for care of sick and disabled veterans. "Local hospitals are local enterprises and they are usually sponsored by the best element in their communities," the editorial continued. "The government, instead of setting up destructive competition with these quasi charities, should utilize their vacant accommodations and pay a fair price for service rendered. Such a policy would be to the interest of veterans and would react favorably upon struggling institutions from coast to coast."—*Journal of the American Medical Association*, January 28, 1933.

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Leaflet Regarding Rules of Publication.—California and Western Medicine has prepared a leaflet explaining its rules regarding publication. This leaflet gives suggestions on the preparation of manuscripts and of illustrations. It is suggested that contributors to this journal write to its office requesting a copy of this leaflet.

EDITORIALS*

FINAL REPORT OF THE COMMISSION ON MEDICAL EDUCATION†

Another Medical Report on Important Factual Information.—An advance copy of a 560-page volume—The Final Report of the Commission on Medical Education—has recently come into our hands. This particular volume owes its origin to the action taken in the year 1924 by the Association of American Medical Colleges. The intervening years have been utilized in the gathering and compilation of the data presented. The Final Report presents these with comments and conclusions of the Commission thereon.

The personnel of this Commission, which was under the chairmanship of A. Lawrence Lowell, president of Harvard University, had as its director of study Willard C. Rappelye, M. D., and included among its other members the following: Walter L. Bierring, George Blumer, Hugh Cabot, Samuel P. Capen, William Darrach, David L. Edsall, Sir Robert Falconer, Henry G. Gale,

* Editorials on subjects of scientific and clinical interest, contributed by members of the California Medical Association, are printed in the Editorial Comments column, which follows.

† From the office of the Director of Study, 630 West 168th Street, New York City.

Michael F. Guyer, Walter A. Jessup, Lafayette B. Mendel, William Allen Pusey, Olin West, Ray Lyman Wilbur and Hans Zinsser.

The well known universities, medical schools and examining boards, to which the above members are attached, may be taken as an indication of the seriousness and thoroughness of their studies: The work of this Commission was financed

"by contributions from most of the medical schools in the United States and Canada, the American Medical Association, the Rockefeller Foundation, the Carnegie Corporation, and the Josiah Macy, Jr., Foundation."

* * *

Scope of Contents of the Report.—Some of the chapters have the following headings:

"The Public Aspects of Medicine; Medical Needs; The Supply and Distribution of Physicians; The Internship; Medical Licensure; Opinions Regarding the Medical Training; Premedical Education; and The Cost of Medical Education."

More than 150 pages are also given over to a total of 161 interesting and valuable tables.

The Introduction gives a brief survey of the growth of medical schools on the North American continent, commencing with the medical schools of the universities of Mexico, and of Lima, Peru, which antedated other American schools of higher learning or of scientific studies by something over 150 years. Some paragraph and sentence quotations follow:

"There were five medical schools in 1800. They were the medical departments of the University of Pennsylvania (1765), Columbia College, formerly King's College (1767), Harvard University (1782), Dartmouth College (1798), and Transylvania College (1799). The number of schools increased to sixty-six by 1860. Twenty of these schools disappeared during the Civil War, but by 1900 the number had grown to 160. . . .

" . . . The Association of American Medical Colleges was organized in 1891. . . .

" . . . The American Medical Association collected and published statistics on the medical school situation in this country in 1900. In 1904 it created a permanent Council on Medical Education. . . .

" . . . The Carnegie Foundation for the Advancement of Teaching published its monumental study by Mr. Abraham Flexner in 1910. The searching report obtained valuable publicity for the campaign for improvement in medical education. It also attracted the attention of philanthropists to the financial needs of university medicine and marked the beginning of substantial contributions to the program. . . ."

* * *

Extended Excerpts in the Miscellany Department of California and Western Medicine.—In the Miscellany Department of this issue are printed some excerpts from the Report, on topics having a bearing on medical economic subjects which have been discussed in this JOURNAL during the past several years. It is hoped these will be of value to readers of CALIFORNIA AND WESTERN MEDICINE. In this connection the suggestion may be made in regard to this volume as was given concerning the "Final Report of the Committee on the Costs of Medical Care," namely, that the book might well have a place in the library of every physician who is interested in the type of

medical problems discussed, and that every county society might well add this volume to its own library and make its presentations a basis of discussion at one or more meetings. The quotations above referred to will be found in this issue on page 138.

* * *

The Public Health Significance of Cultist Medicine Only Briefly Considered.—In a work of such comprehensive scope it was somewhat surprising to find less than three pages given to a consideration of the influence of cultist medicine and of nonmedical practitioners. A significant sentence states:

"... In addition to physicians there are about 35,000 sectarian practitioners of the healing art—osteopaths, chiropractors, Christian Scientists, naturopaths, and other drugless healers, most of whom are practicing medicine. A large majority of these practitioners have had little educational preparation and usually no semblance of scientific training."

* * *

Cultist Medicine Pulls Down the Standards of Healing Art Practice Far More than Do the Weaklings in Nonsectarian or Regular Medicine. In discussing the deficiencies existing among the nonsectarian practitioners, and of the medical schools in which they received their training (at this time there are sixty-six four-year course medical schools in the United States), would it not have been good policy to have emphasized somewhat more than was done, in the brief space allotted, the harm to public health interests arising from the fact that some 35,000 sectarian practitioners—the majority with woefully deficient preliminary and professional training—have been given legal recognition to go before the public as competent practitioners of the healing art? Granted that nonsectarian medicine contains within its fold some who have been poorly trained, or are otherwise incompetent, it still remains true that compared to the cultist practitioners the number and influence of such are comparatively small. The basis of all healing art licensure is the protection of public health standards, through the prevention to practice the healing art, of all persons who are lacking in proper preliminary and professional training qualifications.

Witness the sad conditions existing in California where, through an initiative vote of the citizens, the chiropractors are given an examining board that is practically obligated to accept diplomas from chiropractic schools, no matter how woefully deficient the admission and training standards of the schools may be. It is true that the greater the number of incompetent graduates of sectarian schools, the more must such cultist schools and their proponents ultimately fall into disrepute. But at what a fearful public health cost while this is taking place!

* * *

The Criticism of Basic Science Laws as Contained in the Report, Somewhat Academic.—It was also rather disappointing to note what seemed

an academic criticism of basic science laws, in spite of the fact that the figures from states having such laws indicate that basic science licensure goes far in acting as a real deterrent to the licensing of poorly qualified cultist practitioners. The theoretical advantages of uniform high standards and laws in medical licensure is acknowledged. If the police jurisdiction which is vested in the several states did not make the plan impossible, a national medical examining board to carry out a federal medical licensure statute would be a happy solution of many difficulties. But we can never have that because of the mode of government of our nation and its constituent states. This being the fact which faces us, we should be of a practical turn of mind, and in these matters accept and do those things which best protect the public health and the high standards of medical practice. If basic science laws help protect citizens, and especially citizens who are not in a position to exercise discriminating judgment in the choice of attending practitioners of the healing art, then such basic science laws might seem quite worthy of serious consideration. The protection of the lay public and of general public health activities and standards would seem in many ways to be a more immediate obligation than the promotion of certain university standards or policies in healing art training, no matter how idealistic or desirable.

‘ ‘ ‘

The above are a few of the topics which a scanning of the pages of this excellent volume brings to our attention. There are many others which might be made the subject of comment. It is hoped that a considerable number of members of the California Medical Association will give themselves the pleasure of reading this report.

—

IS PREMEDICAL TRAINING OVERVALUED?

Viewpoints of Some Medical Deans.—Table 120 in the appendix of the "Final Report of the Commission on Medical Education" has the title "Excerpts from Letters of Deans of Medical Schools." Eighteen deans are quoted. Letters 11, 15, 16 and 18 will be here reprinted and some comment made thereon. The quoted excerpts follow:

"11. I feel it beyond question that medicine now is getting very good men who do well in college, well in medical school, and then who make a lot of money in practice. Our modern medical graduates have a keen eye for business. That is *the* hardest problem of the medical dean of today. This is definitely contrary to the spirit of the profession, for a medical man will be a true success in his profession in direct proportion as the spirit of service rules him. He may make lots of money, but he doesn't go after it. Our recent graduates do.

‘ ‘ ‘

"15. While we have no data at hand, after twenty-three years of observation and personal contact with each student for two of his four years' medical course, it is disappointing to note the relatively slight improvement shown as a result of raising the entrance requirement.

"In the majority of cases, the premedical training has been more to satisfy entrance requirements, *i. e.*, to obtain credits, than to give him a better and broader foundation. This condition will not change unless the premedical course is brought under the control and supervision of the medical faculties.

"I am inclined to believe that the advancement claimed for medical students since raising the preliminary requirements is due to the marked progress of the science itself, to improved and increased hospital facilities, to compulsory internship, etc., rather than to any increased preliminary requirements.

✓ ✓ ✓

"16. We find certain schools supplying us with very good men, while others are giving us but mediocre or even poor types.

"From my experience as a teacher extending over fourteen years, I have arrived at the conclusion that it would be far better to lengthen the medical course and shorten premedical work, than to increase the premedical requirement. After spending four years additional in college, enthusiasm for medicine is somewhat damped, the student becoming habituated to study for credits, rather than for the acquisition of the subject.

✓ ✓ ✓

"18. I sigh for the good old days when we obtained our students from the first class high schools. These boys were really full of enthusiasm, eager to receive, and not yet sophisticated to the point of selecting a specialty in the undergraduate years of medicine."

* * *

The Commercial Sense in Physicians.—It would be of interest to know how many of the older and of the recent graduates in the California Medical Association are in accord with the opinion of the dean whose letter was marked 11. We ourselves have heard the substance of his criticism not infrequently during recent years. Whether a stronger commercial sense, if it exists in recent graduates, should be criticized or commended, depends largely upon the manner in which the commercial sense manifests itself. Certainly no objection can be legitimately raised when a physician desires proper compensation for professional services well rendered. By proper compensation is here meant: pay for medical or surgical services at prices not in improper excess of the amounts which would be charged by men of equal professional training and ethical standing, taking into account also the financial status of the patient and other proper facts.

The point has been brought forward by some physicians, that recent graduates are put to such a heavy expense to secure their training and that the modern medical teaching is of such a nature that rural or general practice is now so little attractive that almost of necessity the younger members of the profession have a natural tendency to drift toward and establish themselves in city surroundings. In order to do this, the first offices of the young physician are too often elaborately equipped. This expense, when added to high office rentals and the higher cost of living, brings home at once to the younger member of the profession the need of an ample financial income to meet all these expenditures. As a consequence, it happens from time to time that some

of the recent graduates, in spite of their desire not to do so, are led to charge excessive fees, to the ultimate detriment of the interests of their profession and of themselves. By contrast, in the decades not far distant, the majority of men entering the profession established themselves where overhead expenses were low; but where much work was to be done. Often it is true they did much work without great immediate money rewards. But with the passing of the years many of such physicians, both in urban and rural practice, found themselves receiving incomes that not only permitted them easily to live as befitted their stations in life, but also to set aside reserve funds for future days. Such physicians were able to do this with the esteem not only of a large clientele of devoted patients, but at the same time with the respect of many other citizens who contacted them. To that extent the dean who wrote letter 11 would seem to have been quite in the right when he stated "a medical man will be a true success in his profession in direct proportion as the spirit of service rules him."

* * *

Has the Value of Premedical Training Been Given an Overvaluation?—Letters 15, 16, and 18 may be said to raise this query. The editor has long thought and written that state medical laws which make two and three years of premedical training of collegiate standard an obligatory requirement for medical training and licensure, have failed somewhat, adequately to serve the highest interests of healing art practice. This statement is not to be construed as meaning that such two to four years of premedical collegiate work should not be utilized by all who have financial means or special inclination for such training. It is intended to mean by and large, that a course of medical training based on a four-year high school course, plus one year of premedical training in a liberal arts or science college, plus five (not four) years of medical training, plus one year of internship, would probably place in practice as well or better trained physicians than are now being graduated on the basis of two or three years of compulsory premedical work and four years of medical training (with internship not compulsory as a college or state licensure requirement). The first plan demands seven years, even though only one year of premedical work would be compulsory therein. The second plan, or the one generally in vogue in many schools of today and demanded by many state medical practice acts, also needs seven years (three years premedical and four years medical) training. We cannot get away from our belief that the modern medical man needs more training in medical rather than in premedical work and that he also very much needs the practical experience of compulsory internship. It has never seemed reasonable to us to contend that cultural training necessarily results in large degree from the liberal arts training, or that greater cultural results came to the individual if so-called classical studies were stressed. We have always felt that the biologic and asso-

ciated studies we pursued for the B. S. degree had quite as much cultural influence in stimulating thought and outlook as did the classical studies which were taken. In any event one's cultural instincts and development are something that are quite as much a part of one's own innate self as they are a consequence of certain so-called cultural or foundation curricula. Two extra years of premedical studies are not apt to instill culture or bring it to full development or fruition unless it already has a sound basis for existence. And if a cultural basis is present, the nature of a physician's work and living are such, that there need be little fear concerning the cultural development which will take place within him, as the years go by.

* * *

The 1910 Carnegie Report on Medical Colleges. Along this line, the editor in recent years has been tempted to ask himself whether the report made in 1910 by Abraham Flexner for the Carnegie Foundation for the Advancement of Teaching, which created so much furor at the time and which may be said to have been responsible for the reduction of the number of nonsectarian medical schools from about 160 to about 75 or so, actually did the vast amount of public health service credited to it by some. In making this statement no brief is held for certain nonsectarian medical schools of that time which were very properly put out of existence. But of the other schools which in that day went out of existence directly, or through absorption or union with other schools, there were two score or so that had been doing very honest and quite efficient work. The rosters of graduates of some of those smaller and now inactive schools contain in their lists the names of many men whose contributions to medical science and advancement have by no means been inconsequential. Many of the graduates of such so-called inferior schools made for themselves distinct places in rural and urban practice. The majority of them were loyal to the tenets of nonsectarian medicine and to public health interests. Today we hear the cry made far and wide, that our recent graduates do not wish to be practitioners in rural communities or to take up general practice as in the days gone by. In many of the states of the Union the places of the graduates from the smaller nonsectarian schools are nowadays being taken by poorly prepared cultist graduates. Can such a state of affairs be said to accrue to the benefit of the public? Have the lay citizens in such communities been greatly aided by this change, or have the public health standards of our State or Nation been materially advanced thereby?

When we point to modern day advancement in medical practice, have we a right to ascribe so much of it to the greater amount of preliminary education in vogue since 1910, or is the dean who wrote letter 15 correct when he states:

"I am inclined to believe that the advancement claimed for medical students since raising the preliminary requirements is due to the marked progress

of the science itself, to improved and increased hospital facilities, to compulsory internship, etc., rather than to any increased preliminary requirements."

✓ ✓ ✓

From the comments here made concerning this "Final Report of the Commission on Medical Education" it is easily noted that the volume evidently contains many presentations on which interesting discussions could be had by members of medical faculties and societies. The volume as before stated is worthy of perusal.

Left-Handed Twins Common Phenomena, University of California Study Shows.—If you are a twin there is about one chance in nine that you will be left-handed. If you are not a twin the chance is only about one in fifteen.

This tendency of twins to be left-handed more often than single-born children is definitely shown by a study of 521 single-born children and 386 twins recruited from nineteen junior high schools and sixteen senior high schools of Oakland, Berkeley, and San Francisco, which has just been completed by the University of California Institute of Child Welfare.

The work was done by Dr. Paul T. Wilson and Professor Harold E. Jones, director of research at the institute. Using the criterion of throwing hand as the best test of left- or right-handedness, they found that approximately 11.1 per cent of all the twins tested are left-handed, whereas only 6.5 per cent of the single-born children are left-handed.

In a report of this work written for the magazine *Genetics*, Doctor Wilson and Professor Jones explain that the hand with which a person throws a ball is a better test of left-handedness than other things, such as writing. This is true because left-handed individuals may be trained to write and do other tasks with the right hand, but no one bothers to change the hand which they naturally use in throwing.

Comparison of twins and single-born children in the matter of writing hand showed no dependable or significant difference. The same thing was true of a test to see whether the left or right eye was dominant, and of examinations of the direction of spiral in the crown whorl of hair.

As a tentative suggestion the report states that left-handedness in twins may be fostered by the crowding which they undergo and their position in the mother before birth. In some cases this might lead to the development of functional predominance of one hand.—*University of California Clip Sheet.*

Tularemia.—The following precautions should be rigidly observed by hunters, market men, housewives, and others who handle wild rabbits if they would be absolutely safe from tularemia, or rabbit fever:

1. Never put your unprotected hands inside a wild rabbit.
2. Always wear rubber gloves when handling wild rabbits.
3. The rabbit must be thoroughly cooked; so well cooked that there is no red meat, nor any red juice, near the bone.
4. As at least one per cent of all wild rabbits are infected, the hunter, to be perfectly assured of safety, should not take home a wild rabbit that he shoots in the field if it seems sickly.

5. In order to minimize possible infection, rabbits which seem slow or sickly, or can be run down and killed with a club, should be killed and, preferably, buried.

. . . The germ, *B. tularensis*, also is killed by a temperature of 137 degrees Fahrenheit. Infection is possible even though the skin is unbroken. All rodents are liable to the infection.

EDITORIAL COMMENT

This department of California and Western Medicine presents editorial comment by contributing members on items of medical progress, science and practice, and on topics from recent medical books or journals. An invitation is extended to every member of the California and Nevada Medical Associations to submit brief editorial discussions suitable for publication in this department. No presentation should be over five hundred words in length.

I

The Growing Complexities of Serum-Therapeutic Logic.*—Were a professional immunologist to attempt to epitomize the clinical meaning of the newer theories of serology, he could not do better than select a single typical example. Few examples would be better fitted to this purpose than the classical attempts to prepare a clinically useful antipoliomyelitis serum by the injection of spinal-cord emulsions of experimentally infected monkeys into horses. Twenty years ago the qualitative success of this technical method was axiomatic. To the newer dynamic serology and microbiology, however, this axiom is replaced by a pyramid of a dozen basic hypotheses. An appreciable error in any one of these hypotheses would vitiate the hoped-for therapeutic success. Among these hypotheses now substituted for the classical intuition are:

(a) The assumption that human poliomyelitis is a specific infectious disease, caused by a qualitatively invariable extraneous infectious agent, and is not a mere symptom complex of multiple extrinsic or intrinsic etiology. (Quantitative variations in this hypothetical unit virus, such as increases or decreases in its specific virulence, would, of course, not vitiate the classical logic.)

(b) The assumption that human convalescent immunity to this disease is specific, that the sole or essential factor in this acquired immunity is the formation or liberation of specific humoral antibodies. (An essentially nonhumoral or specific cellular immunity has been recently alleged for certain other infectious diseases.)

(c) The assumption that this hypothetical unit virus is not "transformed" or does not "mutate" into a new biochemical specificity on injection into monkeys. (Such qualitative adaptations of microbial specificity have been recently alleged for certain other infectious agents.)

(d) The assumption that the subcutaneous or intravenous "specificity differential" between the antirhesus phase of this virus and the tissues of the horse, is qualitatively identical with its original antihuman "specificity differential" in man. (Horse immunity and human immunity are known to be directed against different chemical factors in certain antigens, the horse antisera being deficient in certain antibody factors presumably essential for man.)

(e) The assumption that the rhesus spinal cord does not contain "heterophile" or fractional human specificities in sufficient quantities to stimulate the production of antihuman endotheliotoxins or

neurotoxins in the horse. (Such accessory cytotoxins against certain animal species are known to be produced when certain antigens are injected into certain other animal species.)

(f) The assumption that the horse antibodies injected into man would not function as specific growth stimulants for the already present poliomyelitis virus nor produce a clinically dangerous specific immunological negative phase. (That certain presumably immune sera act as specific growth stimulants for the corresponding bacteria is one of the recent surprises of theoretical immunology. The precipitous lowering of specific resistance is a recently recognized contraindication for certain proposed methods of specific vaccine therapy.)

To which must be added (g) the classical hope that the horse antibodies can be produced in sufficiently high titer for clinical use and that, injected into man, these alien humoral defenses are not denatured, bound or otherwise inactivated with sufficient rapidity to prevent their hoped-for therapeutic value.

Research serologists today are frankly and courageously facing a score of such hitherto ignored biological complexities, with numerous newly plausible explanations of previous clinical nonsuccess, and renewed hope of ultimate therapeutic victory.

Stanford University.

W. H. MANWARING,
Palo Alto.

(To be continued)

Encephalography.—Encephalography not only aids in the diagnosis of obscure brain lesions, but is also of definite therapeutic value in certain neurological diseases. Encephalography is the x-ray visualization of the cerebral subarachnoid spaces and the cerebral ventricles by means of the fractional removal of cerebrospinal fluid by cisternal or lumbar puncture with a fraction insufflation of air.

The encephalogram reveals the size of the ventricles, whether they are dilated, as in hydrocephalus; contracted, distorted or pushed to one side of the brain, as in tumor; or whether they are of normal size and position. The third ventricle, the aqueduct of Sylvius, and the fourth ventricle are outlined. Any obstructions in these areas, or failure to fill can be readily interpreted. Abnormalities in the subarachnoid space are visualized, such as arachnitis—referring to adhesions of the arachnoid—with a resultant absence of air over the cortex, or extensive pockets of air as occurring in so-called cortical atrophy, or changes in position of the head on x-ray film.

* This is the first of a series of three papers.

Encephalography must be differentiated from ventriculography, which is the visualization of the ventricles only, and is carried out by direct ventricular puncture. Each of these procedures has its use in the diagnosis of brain lesions. Encephalography is contraindicated in brain tumor suspects wherein the spinal manometric pressure is above 20 millimeters of mercury (taken in the horizontal position), or in patients giving clinical signs of posterior fossa lesions. In these cases we fear the possibility of the medulla jamming into the foramen magnum, which results in respiratory failure and death.

During the procedure of encephalography some of the patients perspire freely, variation of blood pressure and pulse occur; they infrequently collapse, and rarely have convulsions, though headaches, nausea and vomiting usually occur. The cell count of the spinal fluid is increased and the patient is ill for approximately twenty-four hours. The mortality in a series of 325 cases reported by Grant was one patient. In fifty cases under the author's observation, there was no death. This is in contrast to ventriculography, which carries a mortality of 5 to 10 per cent. However, it must be remembered encephalography is performed in the less seriously ill patients.

When unusual neurological symptoms exist, encephalography aids by establishing an organic diagnosis. The presence of surgical lesions is verified, such as tumor, cysts, etc., and may be accurately differentiated from nonsurgical cerebral lesions.

Convulsive states which arise from mass lesions, infections or trauma, or from causes unknown, are segregated by means of the encephalogram into surgical and nonsurgical types. As we all know, convulsive seizures are frequently the first signs of brain tumor, and it is for this reason that encephalography should be considered in all cases of early epilepsy. Various abnormalities of the ventricular system or subarachnoid spaces are demonstrated in certain cases of idiopathic epilepsy, as well as the traumatic type. In cases of epilepsy of the idiopathic and traumatic type, encephalography frequently decreases the number of convulsions, and in some patients even stops convulsions for a period of time. Though this method cannot be recommended as a cure for epilepsy, or even a relief, it is interesting to note that such improvements do occur.

Following head injuries and with the development of the post-traumatic sequelae such as headache, dizziness, etc., abnormalities of the ventricular system and the subarachnoid channels are often visualized by encephalography. Not only is the encephalogram of value for diagnostic purposes in such cases, but it frequently relieves the severe post-traumatic headaches. It is unfortunate this procedure is not used more widely as a therapeutic adjunct for these troublesome head pains.

Bingel, Liebermeister, Holtz, Siegle and Sollgruber, Heymann and Hamburger reported some success in the treatment of meningitis. Guttmann and Kirschbaum, as well as Ebaugh, stated that

in tabes and progressive paralysis the prognosis and results of malarial treatment may be determined by an encephalogram.

In cases of spastic paraplegia and retarded mentality due, apparently, to birth trauma or defective development, encephalography is of value in arriving at an accurate anatomic diagnosis and prognosticating, to some degree, the future of the child—whether intensive training is justified or whether surgical intervention is indicated. The conventional diagnosis of feeble-mindedness, epilepsy and cerebral palsy do not define the anatomic or physiological defects. However, one must not entirely rely upon the encephalographic diagnosis, or prognosticate decisions on the basis of encephalograms alone.

1118 Roosevelt Building.

MARK ALBERT GLASER,
Los Angeles.

International Association for Prevention of Blindness. Progress achieved during the past year in the worldwide movement for conservation of vision, particularly in the effort to guard the eyesight of school children, was described in New York City by delegates from England, France, Germany, Switzerland, and the United States at the third annual meeting of the International Association for Prevention of Blindness.

The United States was represented by Mrs. Winifred Hathaway of New York City. . . . Addressing the convention on the topic, "The History and Development of Sight-Saving Classes in the United States," Mrs. Hathaway said: "Into the foundation of any great building, whether it be an actual architectural structure, a progressive movement, or a cause, are woven the thoughts and ideals of thinkers living in advance of their times. Those in the United States interested in the development of special educational advantages for partially seeing children are ever mindful of the fact that, away back in 1802, Franz Von Gaheis of Austria was the first to recognize that partially seeing children were quite as much misfits in schools for the blind as in schools for the normally seeing.

"It was not until 1908, however, that James Kerr and Bishop Harmon in London brought about the establishment of the first special classes for myopes. The city of Strasbourg, then in Germany, established classes in 1909. It was from these myope schools that the United States received its direct inspiration.

"On a visit to England in 1909, Edward E. Allen, superintendent of the Perkins Institution for the Blind in Boston, learned of the myope schools recently established. . . . It took considerable time to convince educational authorities in the United States that special opportunities were necessary for partially seeing children, but due chiefly to Mr. Allen's efforts, a class was established in Boston in April, 1913. In September of that year, due to the efforts of Mr. Robert B. Irwin, a second class was established in Cleveland. From these two classes have developed the 409 sight-saving classes in the United States today. They are maintained by 118 cities in 22 states. These classes are now so generally accepted as a part of the educational system that the period of fundamental experiment may be said to be of the past.

"In the United States the most conservative estimate of the proportion of children requiring the advantages of a sight-saving class is one in a thousand of the school population. However, in those states and cities that have most fully developed this type of education, the proportion more nearly approximates one in five hundred of the school population. At least five thousand sight-saving classes are needed to provide proper educational facilities for all the visually handicapped school children in the United States. . . ."

C. M. A. DEPARTMENT OF PUBLIC RELATIONS

An open forum for progress notes on the department's activities, and for brief discussions on medical economics. Correspondence and suggestions invited. Address Walter M. Dickie, Room 2039, Four Fifty Sutter Street, San Francisco. This column is conducted by the Director of the Department.

Part-Pay Clinic Plan for San Diego

REPORT OF THE CLINIC COMMITTEE OF THE SAN DIEGO COUNTY MEDICAL SOCIETY*

At the present time medical service is theoretically available in San Diego to two well-defined groups. These are the resident indigent, and the members of the community with incomes permitting them to pay for the services of specialists and private hospitals at regular fees.

Between these two classes is the low income group variously estimated at about 70 per cent of the population in most communities.

Although the medical profession have been acutely conscious of the financial burden illness brings to this group, the suggestion for organized relief first came from the Health Council of the Community Welfare Council. With the point of view of the patient, physician and hospital in mind, they made an intelligent and comprehensive report with a view to a satisfactory solution of this most important problem. Their recommendation is particularly significant at this time when many social groups outside the profession are proposing Utopian and socialistic ideas for adequate medical care for these individuals. Unfortunately, however, many of these public minded citizens are considering the welfare of the patient only and are ignoring the welfare of the other agencies involved.

The original report of the Health Council dealt with a practical plan of operation and scientific standards which with certain modifications suggested by the Council of the County Medical Society, was adopted by the Health Council August 18, 1932.

ORGANIZATION OF THE CENTRAL CLINIC SERVICE

The adoption of the above report created an executive committee known as the Central Clinic Committee composed of representatives from the County Medical Society, Community Welfare Council, County and City Health Departments, County Hospital Advisory Board, Health and Development Department of the City Schools, Navy Relief, Mercy Hospital and San Diego Hospital.

Under the by-laws of this committee the above Board of Directors have the power to appoint an executive secretary and assistant executive secretary, medical social workers, clerks, stenographers, nurses, clinicians and other employees as from time to time may be deemed necessary to perfect the operation of the Central Clinic Service.

* Presented by Hall G. Holder, M. D., chairman of the Clinic Committee, before the San Diego Medical Society, December 13, 1932. The report has been adopted by a resolution of the society.

Close contact with this Board of Directors is maintained by the medical society through its Clinic Committee whose chairman is represented on the board.

Furthermore the by-laws provided for three operating committees elected from the board, termed the Case Committee, Finance Committee and Publicity Committee.

The Case Committee, composed of a chairman and two other members, will function in the establishment of policies for the use of clinics, on fee schedules, on medical social standards, and eligibility of patients. The work of the committee will be based on the case histories reported by the executive secretary. Major decisions of policy may or may not be referred to the entire board for official action. Members of the medical society and Community Welfare Council will be invited to meet with the Case Committee at regular intervals.

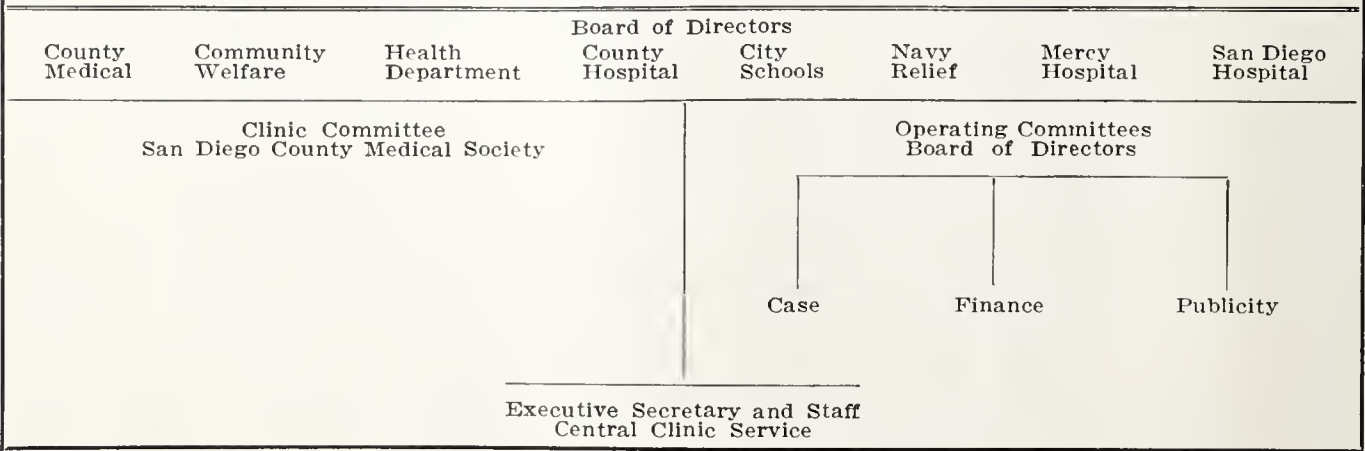
The Finance Committee, composed of the chairman of the board and two other members, arranges for the support of the clinic service. In addition they are charged with the organization of a suitable system of accounting and the responsibility for the disbursement of funds.

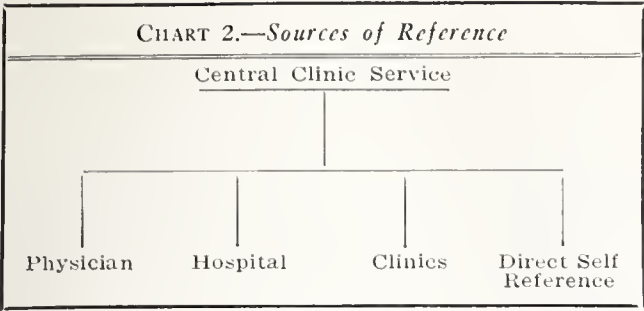
I am glad to report that the necessary financial arrangements to complete an experimental period have already been arranged. We are particularly indebted to the Community Chest for a donation of \$2500 and to the cooperation of Mr. McMullen through the Hospital Advisory Board.

The Publicity Committee, consisting of one or more members, will present the functions and program of the Central Clinic Service to the public through the use of the press, the radio and by talks given to various interested groups. This committee will function with the Publicity Committee of the Community Chest and that of the county medical society.

The executive secretary will be the executive officer of the Board of Directors, and his or her duties will include the keeping of adequate records of all work performed by the Central Clinic Service; service reports on the volume and type of work; the supervision of medical case workers and other staff members employed by the organization. These service reports shall include items on the use of the service by clinics, hospitals and physicians; financial and social status of patients given this service; cases accepted and rejected with reasons, and information as to the duplication of work by the different clinics. The executive secretary will consult with the Case Committee on matters of policy concerning cases or procedures. Further duties of the executive secretary may include field work in connection with the standardization of clinics

CHART 1.—Organization of Central Clinic Service





as suggested by the Board of Directors. The powers of the executive secretary shall include the selection of the staff of the Central Clinic Service in accordance with clinic standards and recommendations. The selection of the staff members will be with the approval of the chairman of the Board of Directors.

ADMINISTRATION OF PLAN

Reference of patients to the Central Clinic Service will come from four main sources: the physician, hospital, clinic or direct by the patient. By far the most important of these will be the physician, who, in the majority of instances has the first contact.

Of interest in this connection is material from a recent survey made by the executive secretary at the County Hospital. Of 607 admissions from October 17 to November 15, 1932, 365, or 60.1 per cent, were referred by physicians.

Patients applying directly to the hospital or clinic, except in emergencies, will be subject to a standardized social investigation as outlined by the Central Clinic Service. This may be done through the central office or by social workers stationed at the various hospitals or clinics. The relation of the County Hospital social service and the Central Clinic Service will be very close. Social workers at the County Hospital should be equipped to determine the patient's exact classification based on her knowledge of the part-pay set-up. First interviews and additional data should be interchangeable between the County Hospital and the Central Clinic Service in order to prevent duplication of work, and make for the greatest efficiency in the allocation of patients as shown by the following statistics. In a five-day intake study at the County Hospital, there was a total of 331 interviews, thirty-six, or ten per cent of which were definitely part-pay cases. During the past six months there has been an average daily intake of 62.3 cases, of which 8.7 cases are new hospital cases and 14.6 new clinic cases. These new cases represent the best material for part-pay clinics as these families have never before received free medical care in this community. The saying is "Once a County Hospital Case Always a County Hospital Case." The first interview is therefore of great importance in determining the self-dependence of the patients with a view to caring for them on the part-pay clinic plan. Combining the referred out cases on the basis of the five-day count, which was ten per cent, with the 60 per cent that are referred direct to the county by physicians, it is estimated that approximately twenty-one cases per day will reach the Central Clinic Service from the county alone, decreasing their daily intake by 33.8 per cent. There will remain as an average daily intake for the County Hospital Social Service, approximately forty-one admissions per day, which includes about 16 per cent county welfare cases.

At the present time eligibility of hospital and clinic treatment at the County Hospital is based on the fact that the applicant cannot pay full fees for medical care. At the present time there is no provision for treatment of part-pay non-residents, except emergency cases, which will be accepted by the county. With the establishing of the part-pay clinic plan, instituting a reduced fee schedule in physicians' offices the eligibility standards for admission to the County Hospital will undergo some revision.

Necessarily as this plan is known to the public many cases considering themselves in this part-pay group will apply directly to the Central Clinic Service for proper allocation.

In order that proper distribution of patients be done efficiently whether to a part-pay clinic or reduced fee case in the physician's own office, it is necessary to obtain a detailed picture of their social and economic status. Furthermore, such a classification is impossible on the part of the social worker unless the physician furnishes information as to the probable length of illness and the cost of the treatment involved. After an estimation of the above factors the Central Clinic Service is charged with the reference of as many cases possible to the physician's office on a part-pay basis.

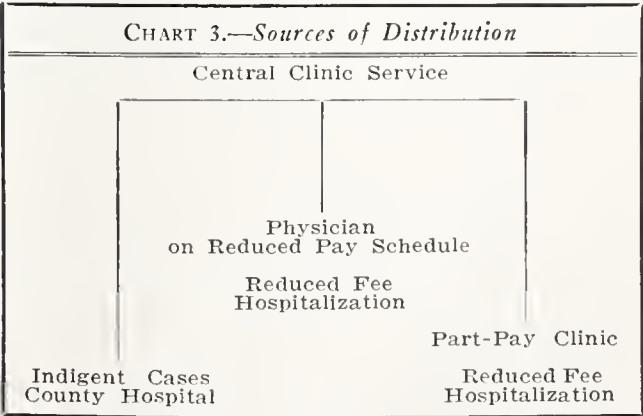
No case will be referred to another service without consultation with the patient's physician. Should a patient apply direct to the Central Clinic Service similarly if he has a physician, the latter will be consulted before any arrangement is made for treatment. The physician in each instance must accept the report of the social worker and agree to the part-pay plan worked out on the basis of the patient's financial responsibility. Should this be so low as to be impractical for acceptance in one's office the patient may then be referred to a part-pay clinic. Should further problems arise during treatment on the fee plan such as need for additional treatment, complications or the need of hospitalization, then the Central Clinic Service should be contacted to arrange a plan for the new situation. These patients are eligible to hospitalization on a reduced fee basis of their economic situation permits, otherwise they automatically become eligible for county care. Likewise part-pay clinic patients may avail themselves of reduced fee hospitalization if possible. Indigent cases belong at the County Hospital.

OPERATION OF PLAN

Facilities for placing this plan in operation are represented first by the physician's office for reduced fee care on the basis of the patient's ability to pay a part of the regular fee which a careful social investigation shows practical. This service is to be on a cash basis, the prescribed fee being paid at each visit. Should a physician elect to treat a patient in his own office at part-pay clinic rates rather than having patient so referred it is his privilege. Should the financial status of a family or patient change, the physician should apply to the Central Clinic Service for a check-up relative to a change of classification. It is to be distinctly understood that in accepting cases the physician agrees to the social plan for each patient as determined by the Central Clinic Service. Furthermore, all information furnished the Central Clinic Service relative to the medical situation and conversely financial information regarding patients or families reported to the physician are strictly confidential. In referring patients to the Central Clinic Service for investigation no mention of fees should be made to the patient by the physician as these are to be apportioned according to the ability of the patient to pay as determined by the social investigation.

The pediatricians in conference with the Health Department have recommended a plan for children which has been assimilated into the general plan. It is proposed that the following pediatric clinics be continued for the present:

Euclid—Wednesday, 1 to 3 p. m.



Stockton—Thursday, 9 to 10 a. m.

Washington—Second, fourth and fifth Tuesdays of the month.

Fremont—First Tuesday of the month.

These clinics are to be diagnostic clinics only, cases requiring treatment will be sent to the physician's office under the proper classification as determined by the Central Clinic Service.

It is further recommended that a concerted effort be made through the Health Department and school organizations to have all immunization against diphtheria and smallpox made in these private low fee clinics. That a concerted effort be made to have all immunization done shortly after six months of age, and certainly before school age. That the type of immunization be standardized and the proper report blanks for the Health Department be enforced. It was also suggested in this connection that an advertising campaign be instituted early in the school year in which immunization would be done in the physician's office for a stated period at reduced fees. That children whose parents are unable to pay the reduced fee schedule should be immunized free of charge, the Health Department furnishing the necessary materials. Furthermore, it was recommended that all pre-school clinics as they are now conducted be discontinued and a more concerted effort be made through the Health Department, the schools, and the parent-teacher organization to have this group of children examined each year through the regular channels in the physician's office either on regular or part-pay schedule.

All treatment clinics with the exception of the county will be on a part-pay basis. The largest general clinic will be located at Mercy Hospital with limited clinics at the San Diego Hospital, their special program being in gynecology and obstetrics. The home delivery obstetrical plan which will permit adequate obstetrical care in the home at a lower fee than hospitalization permits, may be carried on from the physician's office or from central clinics for pre- and postpartum care of these patients in the districts where they are most abundant. Such a program provides for proper equipment and nursing assistance through the aid of the Visiting Nurses Bureau.

Fees for part-pay clinics will be as follows: Registration fee of one dollar for the first visit and diagnosis. In this instance the physician is asked to contribute his services gratis as 25 cents of the fee will be allotted the clinic and the remaining 75 cents will go toward financing the maintenance of the Central Clinic Service. For all subsequent visits the patient will be charged 50 cents, 25 cents of which will go to the clinic and 25 cents to the physician. Laboratory work will be charged for on the basis of 50 cents per examination, physiotherapy at 50 cents per treatment

and x-rays at 50 cents, 75 cents and one dollar, depending on the size of the film. (Suggested fee schedule.)

Mercy Hospital has arranged reduced fee hospitalization for cases certified as entitled to this service on the following basis:

Medical cases: Ward bed, \$3; two-bed ward, \$3.25, and private rooms, \$3.50. This fee includes all x-ray examinations, laboratory work and medication with the exception of certain expensive serums. It is to be understood that these patients will accept ward beds unless the attending physician indicates that the nature of the case requires other accommodations. For surgical and obstetrical cases in addition to the laboratory work and medication, delivery room and operating room fees will be included in the following rates: Ward bed, \$3.50; two-bed ward, \$4; and private room, \$4.50. This plan is to operate on a cash basis for both the hospital and physician and again the medical or surgical fees will in no instance exceed the cost of hospitalization, but in most cases should be approximately the same. For example, the ordinary surgical case remaining in the hospital about two weeks would represent \$50 as the cost of hospitalization, which would entitle the surgeon to a similar amount. The anesthetist and assistant would be arranged for at proportionate fees. An individual or family capable of paying more than \$100 cash would not be entitled to this reduced fee basis.

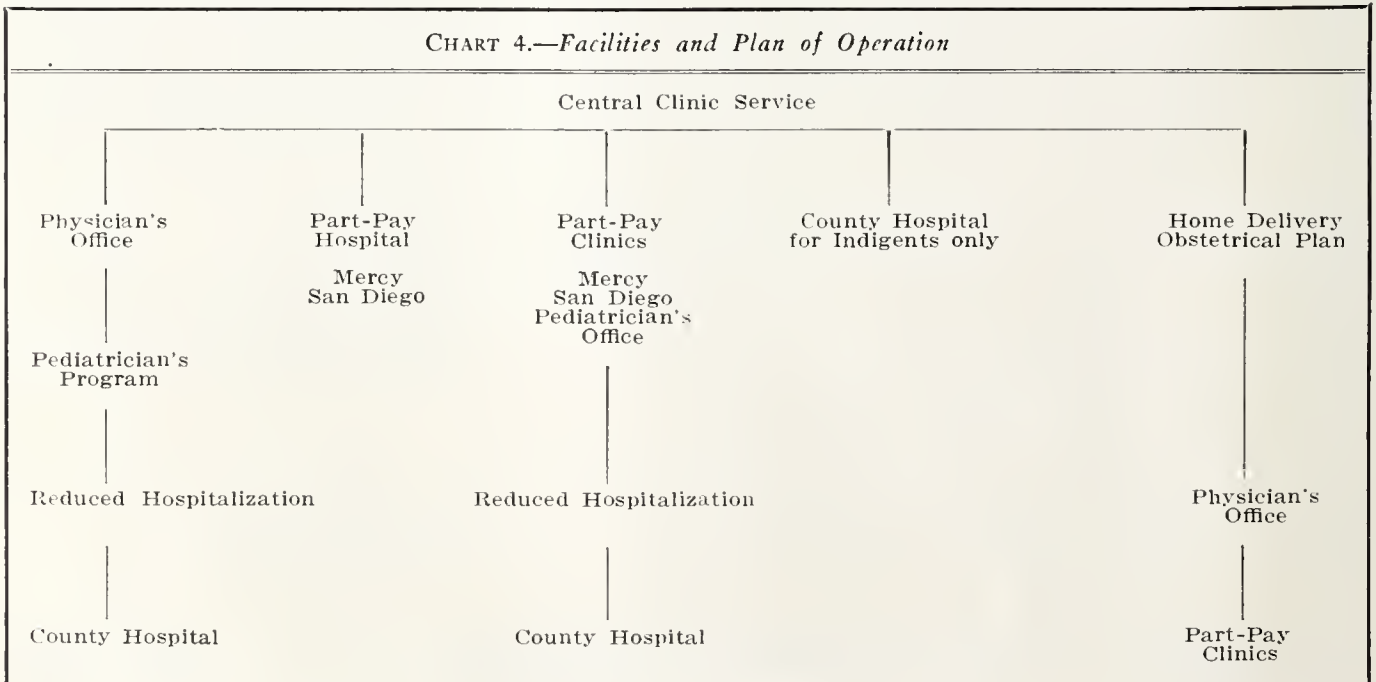
Major illness in the home will be cared for in a similar way on the basis of what part of the regular fee social investigation shows to be possible.

Staff positions on part-pay clinics will be worked out for the greatest possible number, it being hoped that by frequent rotation everyone interested will have an opportunity to serve.

The problem of the allocation of patients referred to the Central Clinic Service in which there is no choice of physician will be one of assignment in alphabetical rotation to those men who have signed with the Central Clinic Service as interested in the respective fields of medical practice. One need not necessarily limit his interest to one field but should indicate the type of case he is capable of caring for. Central Clinic Service files will be open at all times to any member of the county medical society who may care to verify their regularity. If there is any complaint in this respect, it should be reported to the Clinic Committee for investigation.

We are assured the full coöperation of the local naval authorities who have signified their willingness to help out in any way possible. We may expect the coöperation of their social service with the Central Clinic Service. A better method of identification of those entitled to navy care is under consideration which, if feasible, will eliminate ineligibles from receiving medical care to which they are not entitled.

CHART 4.—Facilities and Plan of Operation



Our relations with the Navy Relief Society and the office of the commandant of this district are most cordial.

IN CONCLUSION

In conclusion, I wish to emphasize that the Council of this society has indorsed and this committee has attempted to develop a plan for adequate scientific care for a problem group in society, safeguarding your individual interests on the following points:

1. The plan is under the control of the society.
2. It guarantees free choice of physician by the patient.
3. Active participation is open to every member in the medical society.
4. It provides for a minimum cost of administration by operating on a non-profit basis.
5. It places responsibility for the quality of service directly on the organized profession.
6. It removes the possibility of unethical competition because it includes all physicians in the society and fixes a fee schedule.
7. Lastly, should some form of insurance practice sponsored by the county medical society seem advisable in the future, through our records at the Central Clinic Service we will know best those entitled to such insurance and will have a working set-up to put such a plan in operation. (Since the presentation of this paper, the Scripps Memorial Hospital of La Jolla has signified its willingness to coöperate to the fullest extent with this plan.)

* * *

Some Economic Aspects of Nursing*

Nursing has been as vigorously attacked from the economic aspect, although not as widely written about, as medicine. The cost of nursing has been an item in the general cost of medical care and none has been more cognizant of this than the nurses themselves. But, as in the case of medical care, it may be the system and not the individual who is to blame.

The economic situation in nursing has for a considerable period caused profound concern to nurses watching the trend of medicine, and in 1923 the alarm was sounded that nurses were beginning to increase beyond the demand in certain respects while at the same time many sick people were not receiving nursing. For the past three years committees of nurses have been at work on studies dealing with the situation of supplying nursing care on a more equitable basis to all persons. They have seen, as in the case of medical practice, that the personal nurse-patient basis is costly and extravagant. To distribute service so that patients could receive all necessary nursing and yet not be taxed for unnecessary care has been the object toward which plans have been directed. Notably among these has been the so-called "group nursing plan": two patients and one nurse. This has been adopted by a large number of hospitals in the United States, but not generally taken up in California. The cost to the patient has been considerably lowered by this method of sharing nursing service.

On the individual patient-nurse basis, the eight-hour day is gaining favor with patients, physicians, nurses and hospitals. Begun in August, 1929, in the Hospital of the Good Samaritan, the eight-hour day became immediately popular in that institution. The nurses agreed to reduce their fee from \$7 to \$6 a day, observe the eight-hour schedule and provide their own maintenance. The patient found that the twenty-four hours was covered by three nurses, costing him \$18, and his bill did not contain the item "nurse's" board—\$4 for each day. He also found that he was soon able to drop one nurse, reducing his nursing cost to \$12. If his condition permitted, he could later drop the second nurse and a further reduction to \$6, giving him still a good nursing service of eight hours from 7 a. m. to 3 p. m. This plan worked out so well at the Hospital of the Good Samaritan that it has been adopted generally in Los Angeles and other southern cities. Due to continued economic strain, the nurses proposed a reduced rate to \$5, in some instances \$5.50,

and an expressed desire to take care of their own maintenance. Nurses throughout the state have desired the discontinuance of the patient paying the hospital for their (the nurses) meals, and in all their approaches to the hospital authorities they have endeavored to get this stopped.

Nursing service in the hospital has been expensive and not always satisfactory which has been due to various reasons, notably the reduction of the nursing staff to a degree that precludes average adequate care and brings a burden upon the patient of having to purchase additional service beyond what he was already paying for. A sufficiently liberal nursing personnel in a hospital would not necessitate the expense of so much special nursing except in cases of extremely ill patients or those in the luxury class.

A nursing personnel of graduate nurses on salary, an eight-hour day and caring for their own maintenance would make a much more satisfactory service than what now prevails so far as patients are concerned. Furthermore, if patients could purchase the amount of nursing service they required or wanted, it would not be a loss to the hospital. In other words, if nursing service would be an item the same as laboratory service and carry its own expense, balancing its own budget, and under the control of the superintendent of nurses, it might be a different story for the hospital. Reducing nurses' fees is not the solution of the present hospital dilemma, but a system within the hospital that will be more in accordance with the patient's needs.

Nursing in the home has encountered many difficulties. All sick people are not in hospitals, in fact many are ill and need good nursing care in their homes. One primary difficulty has been that nurses have not been trained for home nursing and this most valuable part of nursing has been overlooked in the desire to train the nurse for the hospital patient only. After graduation nurses have been obliged to get additional training to prepare for this type of work now largely done by Visiting Nurse Associations. Unfortunately, the line of least resistance for the graduate has been hospital special work and a large majority elected to do this to the neglect of home nursing.

Now comes a new situation and patients are not in hospitals, county hospitals excepted, but in their homes. This should call for a new order of service to meet newer necessities. Each home has its own peculiar conditions which must be considered on an individual basis. The sick have need of varying amounts of nursing from a service covering twenty-four hours to a visit of one hour or even less. Here, nursing service should be of such a flexible order as will meet the medical need as well as the family pocketbook. This obviously cannot be done on an individual patient-nurse basis but must emanate from an organized plan with nurse on salary and transportation expenses paid.

It is surprising that in California, a state that has progressed so far in its health work, there has been a very meager provision made by our communities to care for the sick in their homes. Visiting nurse associations are to be found in but a few cities: Santa Barbara, Pasadena, San Francisco, Oakland, San Diego, where each is endeavoring to carry an ever enlarging burden of work in the home care of the sick. Such cities as Sacramento, Fresno, Bakersfield, might easily support such a plan for their people, not to speak of our rural towns in which such service is greatly needed.

The nurses throughout the United States are grappling with these difficult economic problems and through their committees, especially the Committee on the Grading of Schools of Nursing, have been seeking information, making studies over a period of six years, the results of which have been published in their own publications. These studies are now shaping into definite programs of action. Coöperation with the medical group working on similar studies and plans will no doubt create some constructive workable order for the care of the sick, both in hospitals and in their homes.

* By Anna C. Jammé, R. N.

CANCER COMMISSION OF THE C. M. A.

The Cancer Commission was brought into being by the House of Delegates of the California Medical Association to aid in the furtherance of all efforts to combat cancer. The roster of officers and the central office of the Commission to which communications may be sent is printed in this issue of California and Western Medicine (see front cover directory). This column is conducted by the Secretaries of the Commission.

REPORT OF COMMITTEE ON EYE, EAR, NOSE AND THROAT TUMORS

I

CANCER OF THE EYEBALL

There is little opportunity or need to educate the layman recognizing specific symptoms as suggestive of tumor of the eyeball. The layman promptly seeks medical aid for trivial manifestations or disturbances in his most sensitive organ of special sense.

It is important that the general practitioner, to whom many patients first go, recognize the possibility of malignancy in its various manifestations in the eyeball. Here, as elsewhere, early diagnosis is of extreme importance, as it is possible not only to save life but often to save vision, if early attention is given the beginning tumor.

The most common tumors of the eyeball (melanoma of the choroid in adults and neuro-epithelioma (glioma) of the retina in the very young) are both without pain in their initial stages. *Unilateral loss of vision without pain or infection* and with no external evidence of pathology, should lead to the suspicion of an intraocular tumor. An immediate ophthalmoscopic examination is necessary for differential diagnosis. This early recognition may enable one to prevent metastases though the eyeball itself is lost. *Any growth on the conjunctiva that infiltrates underlying tissue* strongly suggests malignancy. Early recognition may permit treatment with radiation or surgery (including electrodesiccation) and prevent the sacrifice of the eyeball and loss of serviceable vision.

There seems to be little if any question as to accepted methods of diagnosis and treatment of tumors of the eyeball. Recently there has been a very noticeable trend toward radium and x-ray therapy wherever possible, rather than immediate recourse to surgery. There should be consultation and coöperation between oculists and radiologists to the end that loss of the eyeball or deforming operative procedures be avoided whenever possible.

Note by Cancer Commission.—In the treatment of the above conditions, mention is made of postoperative radiation therapy. Attention is directed to the fact that in general the Radiology Committee strongly urges preoperative radiation as being even more valuable than postoperative. It is assumed that where preservation of the eyeball is contemplated care in radiation will be exercised on account of the danger of producing cataract. See report of Radiology Committee, California and Western Medicine, Vol. 37, p. 409, December, 1932.

It is again urged that where there is a choice between radiation and surgery or where both are contemplated, consultation between surgeon and radiologist should be held before any treatment is begun.

Following is a summary of the majority opinion of the committee on the diagnosis and treatment of the principal eyeball growths:

I

Carcinoma of Caruncle.—This is a rare tumor, originating in the caruncular glands. It should be removed completely followed by x-ray or heavily filtered radium pack.

II

Epithelioma of Conjunctiva is usually found at the corneoscleral junction where the two types of epithelium meet. It presents itself as a small rounded nodular mass slowly increasing in size, not painful,

usually occurring after the age of forty-five years. Blood vessels in association branch in an irregular manner and show excessive development. The growth may be lobulated with free edges, but the point of origin is firmly attached. It may invade the corneal lamellae and lead to perforation. There is a tendency to spread along the sheaths of the anterior ciliary vessels.

Treatment, Epithelioma of Conjunctiva.—If the cornea or sclera is not infiltrated, one may excise the growth by whatever method the individual operator elects. Subconjunctival tissue must be removed widely due to its tendency to extend along lymphatics. Removal should be followed by the use of x-ray or radium. In small tumors, if there has not been a perforation, radiation in large doses may be successful. Metastases are late and the tumors are usually radiosensitive. Enucleation of the eyeball should be done at once if there is any question of inability to remove or destroy entire growth. Prevention of metastases should be considered even if necessary to sacrifice good vision. The preauricular glands should be excised if palpable.

III

Tumors of Cornea.—Primary corneal tumors are extremely rare. Corneal growths are usually epitheliomata starting in the conjunctiva and spreading into corneal tissue. Enucleation is usually necessary. In early cases radiation should be tried first for a limited time (having in consideration the vision in the unaffected eye).

IV

Tumors of Iris.—Carcinoma of the iris is rare and usually metastatic. Any part of the iris may be involved. It appears in the form of small brownish growths rapidly increasing in size. One-third of the cases involve both eyes. It is more frequent in women and the majority of cases follow carcinoma of the breast. Sections show alveoli containing groups of glandular epithelial cells and no intercellular substance. The cells show degeneration and become vacuolated. It rapidly involves other parts of the eye, and due to its widespread and early dissemination the disease is usually rapidly fatal. Glaucoma usually occurs. Evisceration of orbit may be performed for palliation.

Melanoma is the most common malignant tumor of the iris and probably originates from small nevi. *It may or may not be pigmented.* It is more frequent in females between the ages of thirty-five and fifty-five. Descemetitis is often present and dust-like pigment appears. Glaucoma presents itself sooner or later. Iridectomy is done for diagnostic purposes. It must be differentiated from tubercle, hemangioma, cyst and gumma. Sections of tissue show small spindle cells with large nuclei in tumor with much pigment.

Treatment, Tumors of Iris.—The possibility of removing the growth, if small, by broad iridectomy is admitted by many authors. However, simultaneous involvement of the ciliary body may be present which cannot be seen. For this reason enucleation, and not iridectomy, is recommended by others and appears to be the safer procedure. All are agreed that larger growths require immediate enucleation. It is possible to diagnose and remove many melanomata before metastasis has taken place and a variable percentage of cures may be obtained.

V

Carcinoma of the Choroid is rare, and always metastatic, the primary growth being most often in the breast. The ophthalmoscope discloses a flat or oval tumor, dirty yellow in color and usually with scattered pigment spots at the posterior pole of the eye. Enucleation may be necessary to relieve pain.

Melanoma of the Choroid is usually primary but may be metastatic. The ophthalmoscope reveals a darkened knob-like tumor mass extending into the vitreous, most often at the posterior pole of the eye. It is early accompanied by retinal detachment which shows a darkened reflex by transillumination. Vision is variously affected, depending upon the extent and location of the retinal detachment. There may be no pain. Intraocular tension is not increased. This is the so-called first stage which may last from one to two years.

The second stage is characterized by the rise of intraocular tension with the accompanying signs and symptoms of an acute inflammatory glaucoma, the most prominent of which being steamy cornea, shallow anterior chamber, great congestion, opacities in the media and intense pain.

In the third stage, the tumor escapes the globe either posteriorly along the nerve to invade the orbit or by rupture anteriorly at the sclerocorneal margin. Involvement of surrounding tissue is rapid and death usually ensues within a few weeks through metastases to other organs.

Treatment, Melanoma of Choroid.—Immediate enucleation in stages one and two; in stage three, complete orbital extirpation.

The prognosis varies with the time of recognition, being best (as high as 60 per cent cures) in the preglaucomatous stage, less hopeful (40 per cent) after glaucoma has ensued and very bad after orbital involvement.

VI

Neuroepithelioma (Glioma) of the Retina grows from the two granular layers of the retina, chiefly from the inner one. The cells grow along the larger vessels, giving a tubular appearance. It is a disease of early childhood, usually under three years of age. In 25 per cent of cases, both eyes are affected. It may appear in several members of the same family. The first symptom is a peculiar reflex from the eye resembling a cat's eye in the dark. Parents notice the child is blind in the affected eye. There is no pain or redness, the media is clear, the pupil dilated. The ophthalmoscope discloses a whitish-yellow mass in the fundus covered with a network of vessels with smooth or nodulated surface. This stage may last several months while the growth gradually fills the globe. Then pressure symptoms arise. There is increased tension, pain and congestion; the child is fretful with increasing cachexia. The growth finally breaks out of the globe at the corneoscleral margin in front, or along the optic nerve behind. It now grows very fast and involves other structures by contiguity or metastasis, and is rapidly fatal.

Treatment.—Immediate enucleation if growth is still confined to the globe; otherwise, complete exenteration. One member of the committee suggests that if the eye to be treated is the only remaining eye it would seem justifiable to try radiation first. Occasional cures have been obtained, but the prognosis is usually bad.

SUMMARY

1. Unilateral loss of vision without pain or infection should arouse immediate suspicion of intraocular tumor.
2. Any growth on the sclera or conjunctiva infiltrating underlying tissues strongly suggests malignancy. Many of these tumors may be cured without sacrifice of the eyeball.
3. Early recognition of many of the tumors of the eyeball may permit cure without sacrifice of the eye-

ball; or, if not that, at least life-saving, by removal of the eyeball before metastasis has occurred.

Respectfully Submitted,

COMMITTEE ON EYE, EAR, NOSE AND
THROAT TUMORS:

Dewey R. Powell,	George N. Hosford
Chairman	Simon Jesberg
Frank S. Baxter,	J. Roy Jones
Secretary	George H. Kress
Hans Barkan	Robert C. Martin
Wallace R. Briggs	C. H. Montgomery
Charles William Brown	Roy F. Nelson
A. E. Edgerton	Otto H. Pflueger
Harold Fletcher	F. H. Rodenbaugh
Walter Scott Franklin	E. C. Sewall
H. B. Graham	Milton H. Shutes
W. D. Horner	Henry J. Ullmann

Relationship Between Occupation and Cancer.—Of 898 cases of primary cancer of the lung the majority occurred in patients belonging to the laboring class; but no one type of labor was specially concerned. People engaged in dusty occupations seemed to be more prone to develop cancer of the lung than people in other occupations. It would thus appear that a dusty atmosphere is, definitely, a predisposing cause of primary cancer of the lung.—Ninth Annual Report, British Empire Cancer Campaign, 1932.

Contemplated Changes in New York Sanitary Code.—At a meeting of the Public Health Council on June 28, 1932, important regulations were considered for inclusion in the Sanitary Code.

APPROVAL OF SURGICAL PATHOLOGISTS

Proposed Regulation.—Tissue removed at operation or necropsy to be examined. Representative specimens of tissue removed at operation or at necropsy which require laboratory examination as an aid in the diagnosis, prevention, or treatment of disease or to determine the cause of death shall be submitted to an approved laboratory, to the division of laboratories and research, Albany or New York City, or to the state institute for the study of malignant diseases, Buffalo.

Physicians and surgeons must, in many instances, depend upon the ability of the pathologist who examines specimens of tissue from their patients. Consequently, persons doing such work should have had adequate training and experience. Should a mistake be made in the examination of a specimen, a mutilating operation may be performed unnecessarily, or, if the growth is cancerous and the pathologist fails to recognize evidence of malignancy in the specimen which he examines, the patient may lose his only chance of proper treatment and possible recovery. The commission appointed by Governor Roosevelt in 1930 to advise him relative to the administrative and legislative aspects of public health in New York State has presented the matter concisely in its report. "The commission has been impressed by numerous reports of the lack of qualifications on the part of pathologists who make tissue diagnoses of cancer. This is a serious matter, since an error of the pathologist is likely to result either in a needless operation or in the failure to operate when the patient is in need of it. The State Department of Health and the Public Health Council have done much to extend and to improve the quality of bacteriological service in public health laboratories throughout the state through a system of approval issued to such institutions. The system of approval should be extended to include pathological laboratories and pathologists" (*Public Health in New York State**)

The legislative bodies have appreciated the need for suitable action. Last spring the Public Health Law was amended to permit the Commissioner of Health to issue approval to surgical pathologists as well as to directors and bacteriologists in charge of laboratories.—New York State Department *Health News*.

* Report of the New York State Health Commission, 1932, pp. 394-395.

STATE MEDICAL ASSOCIATIONS

This department contains official notices, reports of county society proceedings and other information having to do with the state associations and their component county societies. The copy for the department is edited by the state association secretaries, to whom communications for this department should be sent. Rosters of state association officers and committees and of component county societies and affiliated organizations, are printed in the directories noted under Miscellaneous, on the front cover index.

CALIFORNIA MEDICAL ASSOCIATION

JOSEPH M. KING.....President
GEORGE G. REINLE.....President-Elect
EMMA W. POPE.....Secretary-Treasurer

OFFICIAL NOTICE

Hotel Del Monte

Rates for Annual Session, April 24-27, 1933

The following rates are quoted, American Plan:

Single room with bath (one person), \$9 per day.

Double room with bath (two persons), \$8 each person per day.

Two single rooms, bath between (two persons), \$8.50 each person per day.

Two double rooms, bath between (four persons), \$7.50 each person per day.

Two double rooms, bath between (six persons, bed for each), \$7 each person per day.

COMPONENT COUNTY MEDICAL SOCIETIES

CONTRA COSTA COUNTY

The December meeting of the Contra Costa County Medical Society took place on the evening of Saturday, December 17, 1932, at the Hotel Carquinez.

Following the custom of bygone years, this was the annual party, held jointly by the medical and dental professions.

The evening was most delightfully occupied by an excellent dinner, followed by dancing, the music for which was furnished by the Denny Shaw orchestra. During the dinner the guests were entertained by the vivacious Spanish dance team, Arco and Anita, and by an intensely interesting short historical sketch of the Contra Costa County Medical Society by Dr. C. L. Abbott, who introduced as a feature climax to his talk a typical old-time advertising medicine man, whose monologue on the merits of his patent remedies was of such rapid-fire tempo as to leave one breathless but delightfully regaled.

The ladies of the auxiliary had arranged the decorations, and the room was charming in appropriate holiday dress. For this addition to the pleasure of the evening, we are especially indebted to Mrs. Rose Abbott, Mrs. Helen Weil, Mrs. Fernandez, and Mrs. Lucas.

Fifty-seven attended, and all voted the event one of the very best on record.

For the success of the whole affair, we are indebted to the committee who worked so hard to make it memorable—Doctors Harry Ford, Kaho Daily, and M. L. Stauffer.

That everyone enjoyed the party is attested by the expression on the part of many that we have two annual parties hereafter—an informal dinner in the mid-summer, and the time-honored formal in December.

The first regular monthly meeting for 1933 of the Contra Costa County Medical Society was held on Tuesday, January 10, at the Hotel Carquinez, Richmond.

The meeting was called to order at 8:30 p. m., Dr. L. H. Fraser presiding.

The guest speaker of the evening was Dr. Charles Dukes of Oakland, chairman of the Public Relations Committee of the California Medical Association. He was introduced by the president, Doctor Fraser, and unfolded to the society, most clearly and comprehensively, the method whereby Alameda County deals with the medical care of the indigent, those with a slight financial reserve, and the class not embraced in either of the above groups. He explained very fully the organization and the method whereby it functions, showing the feasibility of the same general plan, with some slight variations, which might be employed in our county.

Much interesting discussion followed in which the following members participated: Doctors John Beard, Fred Nevius, William Rowell, Harry Ford, and Marguerite Keser.

Mention was made of the illness of several of the members by the secretary—Doctors L. St. John Hely, H. L. Carpenter, and L. Abbott Hedges.

The following communications were read by the secretary:

A note of thanks from Mrs. Hely for the messages and flowers sent by the society to Doctor Hely.

A resolution from the Orange County Medical Society, relative to the gratis administration of immunization to school children. Remarks were made on this subject by Dr. S. N. Weil and by Doctor Dukes, and the communication was ordered filed. Doctor Fraser recommended that each physician handle the problem individually.

A letter from the Pittsburg Health Center, relative to the establishment of an eye clinic, was discussed by Dr. M. L. Stauffer, and referred to the Hospital Committee by Doctor Fraser.

The following committees were appointed and announced by Doctor Fraser for 1933:

Public Policy and Legislation—H. G. Ford (chairman), E. R. Guinan, W. A. Rowell.

Medical Economics—S. N. Weil (chairman), J. W. Bumgarner.

Hospitals and Clinics—U. S. Abbott (chairman), F. P. Nevius, J. A. Beard, M. Deininger-Keser.

Health and Public Instruction—J. M. McCullough (chairman), C. R. Blake, J. W. Bumgarner.

Membership—Clara H. Spalding (chairman), A. H. Beede, M. L. Stauffer, Kaho Daily.

History and Obituary—W. E. Cunningham.

Advisory Committee to Woman's Auxiliary—W. S. Lucas (chairman), U. S. Abbott, H. L. Carpenter, Kaho Daily.

Public Relations—H. G. Ford (chairman), U. S. Abbott, J. M. McCullough, S. N. Weil (secretary), A. H. Beede.

An application for affiliation of Dr. J. J. Fitzgerald from Tehama County Medical Society was received and presented to the society by the secretary. This was referred to Dr. H. G. Ford, censor.

After thanking Doctor Dukes for the splendid talk, the meeting was adjourned by Dr. H. L. Fraser. After this a buffet luncheon was served.

The meeting had an attendance of twenty-five, seven of whom were guests: Doctors Dukes, Walter Johnson, Kearns, Edmeads, William Powell, Mr. Johnson and Mr. Lopez. The eighteen members were: Doctors Fraser, Stauffer, Nevius, Keser, Rosa Powell, Ford, Rowell, Sweetser, Beard, Fernandez, Weil, J. B. Spalding, U. S. Abbott, Leggo, Belugum, Blake, Lucas, and Clara Spalding.

CLARA H. SPALDING, *Secretary*.

MARIN COUNTY

At the annual meeting of the Marin County Medical Society held in December, 1932, the following officers were elected to serve during the year 1933: President, John H. Kuser, Cheda Building, San Rafael; vice-president, Joseph O. Hawkins, San Rafael; secretary-treasurer, Carl W. Clark, San Rafael. Board of Trustees: H. O. Howitt, San Rafael; A. H. Mays and C. F. Larson, both of Sausalito.

CARL W. CLARK, *Secretary*.



ORANGE COUNTY

The forty-fifth annual meeting, inaugurating the forty-fourth year of the Orange County Medical Association, was held, jointly with the Woman's Auxiliary, at the Santa Ana Country Club on January 3 at 7 p. m.

Delightful chamber music was furnished by a string trio during the dinner and interspersed with the program. The toastmaster was Dr. H. D. Newkirk. Mrs. F. E. Coulter, president of the state auxiliary, spoke on the *State Auxiliary*. The retiring president's address by Dr. J. L. Maroon on *The Specialist* followed. An address by the retiring county auxiliary president was given by Mrs. Dexter Ball. The incoming president of the auxiliary, Mrs. C. S. O'Toole, spoke on the *County Auxiliary*. The guest speaker was Mr. Baxter Geeting, who cleverly impersonated a French scientist until his identity was disclosed by the incoming president. The officers for the year 1933 were then installed.

The following is a list of newly elected officers: President, William S. Wallace; vice-president, Harry G. Huffman; secretary-treasurer, Waldo S. Wehrly; librarian, C. D. Ball. Councilors: J. M. Burlew (1933-1935), D. R. Ball (1932-1934), F. H. Gobar (1931-1933), Delegates: D. R. Ball (1932-1933), J. I. Clark (1933-1934), J. L. Maroon (1933-1934). Alternates: W. F. Baker, H. G. Huffman, and R. P. Yeagle.

WALDO S. WEHRLY, *Secretary*.



PLACER COUNTY

The Placer County Medical Society held its regular monthly meeting in Auburn, Saturday, January 14.

There were present the following members and visitors:

Members—Doctors Crossen, Flatley, Radford, and Thoren, all of Weimar; Empey, Eveleth, and Louis E. Jones, all of Roseville; Monica Stoy Briner, C. Conrad Briner, Dunievitz, Mackay, Miller, and Russell, all of Auburn; Peers of Colfax, Paul D. Barnes of Loomis, and L. B. Barnes of Newcastle, president of the society.

Visitors—Doctors Arthur L. Bloomfield, professor of medicine, Stanford University Medical School, of San Francisco; J. F. McNally of Roseville; Ward of Auburn; Emma W. Pope, secretary of the California Medical Association, of San Francisco; Mrs. Robert A. Peers of Colfax, and Miss Giottonini of Weimar.

The application for membership of Dr. Ray C. Atkinson of Weimar was read and Doctor Atkinson was unanimously elected to membership.

Resolutions on the deaths of Dr. Henry Nelson Miner and Dr. Robert Fleming Rooney were read and ordered incorporated in the minutes.

The following committees were appointed by the president:

Committee on Resolutions—Paul D. Barnes of Loomis and Lucas W. Empey of Roseville.

Committee on Public Relations—Robert H. Eveleth, Louis E. Jones and Lucas W. Empey, all of Roseville; J. A. Russell of Auburn, with the president, L. B. Barnes, as ex-officio member of the committee.

Dr. Max Dunievitz of Auburn reported a case of a very large retrosternal thyroid in a woman of about seventy years of age. The doctor showed x-ray films taken before death, and also exhibited a beautifully mounted pathological specimen which included all the

thoracic contents. Doctor Dunievitz made a plea for more frequent autopsies.

Dr. Paul D. Barnes of Loomis reported a case of herpes zoster in a child five years of age. He called attention to the rarity of herpes in children and discussed the relation of herpes to chicken-pox.

The president introduced Dr. Arthur L. Bloomfield, who addressed the society on *The Development of Knowledge About Acute Respiratory Infection* (the common cold).

The importance of common cold was emphasized from the standpoint of the total disability to the community. The essential disease featured by mild constitutional symptoms—malaise, aching, slight fever, and congestion of the mucosa of the upper air passages with thin watery discharge—was differentiated from the sequela, such as otitis, sinusitis, and bronchitis, which are not part of the primary infection. Theories of etiology were discussed and it was pointed out that ordinary bacteria are not the primary cause of colds because of their universal presence in the upper air passages and the lack of change in the flora when a cold comes on. The proof that colds are due to a filterable virus was analyzed.

Specific treatment does not hold out promise, since a spontaneous attack only confers immunity for a few weeks. Mixed vaccines have no sound theoretical basis, since they do not contain the causative agent, but in practice they may have some nonspecific prophylactic effect by foreign protein action. If possible, persons with colds should be put to bed at the start or at least kept quietly at home, both for their own sake and to limit the spread of infection.

Doctor Bloomfield's address was discussed by Drs. Peers, C. C. Briner, Max Dunievitz, R. H. Eveleth, L. B. Barnes, Monica Stoy Briner, and L. W. Empey. The discussion was closed by Doctor Bloomfield.

The president introduced Dr. Emma W. Pope. Doctor Pope made a few remarks.

ROBERT A. PEERS, *Secretary*.



SAN BERNARDINO COUNTY

The San Bernardino County Medical Society held a regular meeting at the county hospital in San Bernardino on Tuesday, January 3.

The meeting was called to order by the president at 8:10 p. m.

An invitation from the Harbor Branch of the Los Angeles County Medical Society was given attention.

The program of the evening was then given, and is as follows:

Talking motion pictures—Courtesy of the Petro-lagar Laboratories: "Repair of Urethrocele, Cystocele and Lacerations of the Cervix"; "Repair of Second and Third Degree Lacerations of the Perineum and Rectocele."

Primary and Intermediate Repair of the Cervix and Perineum by Dr. W. B. Thompson of Los Angeles. (Doctor Thompson substituted for Doctor Vruwink, who was unable to be present.) Discussion was opened by Dr. Howard Hill.

Refreshments were served, after which the meeting adjourned at 10 o'clock.

E. J. EYTINGE, *Secretary*.



SAN JOAQUIN COUNTY

The stated meeting of the San Joaquin County Medical Society was held Thursday, January 5, in the Medico-Dental clubrooms, 242 North Sutter Street, Stockton. The meeting was called to order at 8:15 p. m. by President George H. Sanderson.

After a few words of thanks for the coöperation and assistance of the members of the society during his administration of the past year, President Sanderson called Dr. J. F. Doughty, president-elect, to the chair. The latter gave an address, in which he outlined his policies and hopes for the coming year.

After the reading of recent correspondence, it was moved by Dr. A. L. Van Meter, seconded by Dr. P. B.

Gallegos, that the society send letters of protest to the Congressional Committees in reference to the proposed legislation to appropriate funds for the building of more Veterans' Bureau hospitals.

It was further moved by Dr. J. D. Dameron, seconded by Dr. L. Dozier, and carried, that each individual doctor write such letters on his own stationery and that a special committee be appointed to superintend the project.

On motion by Dr. B. J. Powell, Sr., seconded by Dr. George H. Sanderson, it was voted to place the membership of Dr. W. B. March of Burson on the retired list.

The president announced the appointment of a Special Committee on Social Problems to consist of: Doctors H. E. Kaplan (chairman), L. Dozier, G. H. Rohrbacher, J. F. Doughty, P. B. Gallegos, G. H. Sanderson, and C. A. Broadus.

Dr. H. E. Kaplan reported that this committee had already met several times for study and to outline a course of study and investigation. He expected to make a preliminary report in February.

The matter of permitting the Boye studios to photograph each and every member of the county society and to present the society with a bound volume of all such photographs free of charge was presented. Dr. F. B. Sheldon moved that this be permitted. It was seconded by Dr. D. R. Powell, and carried unanimously.

Dr. Cameron Haight of the University of Michigan presented a paper on *Recent Developments in the Surgical Treatment of Pulmonary Tuberculosis*, illustrated by stereopticon views and x-ray pictures. He emphasized the point that whereas surgical interference is a most important adjunct in the treatment of pulmonary tuberculosis, yet it is only supplementary. He pointed out that rest and care in a properly conducted sanatorium is still the most important in treatment and the backbone of all factors in the ultimate cure.

Doctor Haight covered all the known surgical procedures which have been devised principally to put the affected lung area at rest and to obliterate existing lung cavities. Among these procedures was the obliteration of the intercostal nerves either by crushing for temporary effect or resection for permanent chest collapse. The same effect is produced by crushing or resecting the phrenic nerve.

On account of existing pleural adhesions in 25 to 30 per cent of the cases, the thoracic cavity does not collapse and other methods must be resorted to. This may be accomplished by extradural injections of paraffin. This method is especially adaptable for collapse of known cavities found by x-ray.

An electric-lighted instrument, the thoracoscope, is devised to locate and divide by cautery the bands of adhesion which prevent collapse in many instances.

The method of transplanting portions of the pectoral muscles to aid collapse was illustrated. Also the extrathoracoplasty operation was shown in which the upper eleven ribs are resected near the transverse processes, the whole procedure requiring several operations to avoid shock.

The discussion was led by Doctors McGurk and Sanderson.

The meeting was adjourned and refreshments were served.

C. A. BROADUS, *Secretary*.



SANTA BARBARA COUNTY

The regular meeting of the Santa Barbara County Medical Society was held in the Bissell Auditorium of the Cottage Hospital on Monday evening, December 12, with President Koefod in the chair.

The meeting was opened by Dr. P. A. Gray, who gave a very comprehensive paper on *The Higher Carbohydrate Method in Diabetes Mellitus*. This was discussed by Doctor Sansum.

Doctor Shelton then outlined his plan for the medical fee schedule for moderate incomes. This was discussed by Doctors Freidell, Lamb, Lewis, Eder, and Mr. Brannion of the County Welfare Department.

A communication from Sister Winnifred of Saint Francis Hospital was read in which she explained the advantages and disadvantages of the plan as it is now in operation at Saint Francis Hospital.

It was then moved, seconded and carried, that Doctor Shelton head a committee of five, who shall act during the ensuing year in formulating and perfecting further plans which may be adopted by the society.

The application of Dr. Clifford E. Case of Santa Maria was balloted upon and he was unanimously elected into the society.

A copy of a resolution from the Orange County Medical Society was read and it was moved, seconded and carried, that this resolution be referred to the Public Relations Committee for recommendations.

A communication from Dr. O. C. Jones was read. No action was taken.

It was moved, seconded and carried, that the county medical society contribute \$15 to the committee toward financing the float in the New Year's parade at Pasadena.

Doctor Ullmann, as councilor of the third district, spoke regarding the action of the entire State Council in the matter of the use of county hospitals for hospitalization of persons other than indigents. He said it was necessary and desirable that a court decision be had definitely interpreting the statutes in this regard. Mr. Butcher, attorney for the taxpayer bringing the suit, explained the necessity of the twofold nature of the action in order to obtain the desired court rulings on the legal questions involved.

Doctor Henderson, chairman of the Public Relations Committee, introduced the attached resolution, which was adopted unanimously by the society:

WHEREAS, It being the consensus of eminent authorities that the practice of admitting pay patients into county hospitals works a hardship upon and leads to the neglect of the poor and indigent for whose benefit such institutions are operated; and

WHEREAS, It casts upon the taxpayers an extra and illegal expense; and

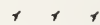
WHEREAS, Said practice is injurious to private, non-profit hospitals and to the service which they render to the public; and

WHEREAS, Equitable proceedings have been instituted in the Superior Court of this county for the purpose of restraining said practice from further continuance, and obtaining decision on the legality of such practice; now, therefore, be it

Resolved, That the Santa Barbara Medical Society go on record approving said proceedings; and be it further

Resolved, That said body will lend its fullest cooperation and assistance, to the end that the court be adequately supplied with such data as we, as members of the medical profession, are particularly able to afford in the hope that the aforesaid proceedings be carried to the proper tribunal for final decision.

It was decided that the annual meeting should be a formal dinner held at El Paso.



The annual banquet meeting of the Santa Barbara County Medical Society was held at La Hacienda on Monday evening, January 9, with President Koefod presiding.

There were present fifty-three members of the society and three guests.

Greenough's orchestra furnished music during the dinner hour.

At the conclusion of the dinner, Doctor Koefod introduced the speaker of the evening, Dr. Herman Adler, professor of psychiatry, University of California, who gave an extremely interesting and comprehensive talk on *The Role of Psychiatry in Medical Practice*.

Doctor Geyman reported that Dr. Herman C. Bum-pus of the Mayo Clinic would be available to speak before the society on January 17.

The president then called for reports from the various committees, Dr. Henderson reporting for the Pub-

lic Relations Committee, Dr. Rexwald Brown for the Medical Economics Committee, Dr. Roome for the Special Committee on County and City Amalgamation, Dr. Shelton on the costs of medical care, and Dr. Markthaler on the tuberculosis problem in Santa Barbara.

The applications of Dr. Ina M. Richter, who transferred from San Francisco County; Dr. Clifford E. Case of Santa Maria, and Dr. A. B. Steele of Santa Barbara were read and, upon balloting, they were all unanimously elected into the society.

The election of officers for the year 1933 resulted as follows: President, M. J. Geyman; vice-president, E. L. Markthaler; vice-presidents-at-large, Jules Betero of Santa Maria and H. G. Hanze of Solvang; secretary, W. H. Eaton.

WILLIAM H. EATON, *Secretary*.

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SISKIYOU COUNTY

The Siskiyou County Medical Society held a business meeting at the Weed Hospital on January 15. The members present were: Doctors Dickinson, Newton, Steele, Seeley, Todorovic, Vidricksen, V. W. Hart, and W. E. Hart.

The question of management at the County Hospital was brought up, and in an effort to have better coöperation between the Board of Supervisors and the medical society a plan was suggested whereby an advisory committee from the medical society would meet with the Board of Supervisors and confer with them on any medical problems which might arise. The board was also petitioned to employ as county physician and county health officer only those physicians who had received the endorsement of the medical society.

A resolution was passed condemning the plan of the Veterans' Administration in building more hospitals, and favoring the policy of utilizing local hospitals and local physicians in the care of veterans who have service-connected disabilities.

The new officers elected for 1933 were: President, Dr. W. E. Hart of Yreka; vice-president, Dr. Todorovic of Dorris; secretary-treasurer, Dr. Langer of Hilt.

W. E. HART, *Secretary*.

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SONOMA COUNTY

The Sonoma County Medical Society held its regular monthly meeting at the Hotel Petaluma, Petaluma, on January 12, President Mark L. Lewis presiding.

The following members and guests were present: Doctors Brooks, Marsh, Spear, Honor, Butler, Bogle, Morris, Carlson, McLeod, Peoples, Rogers, Lewis, and Shipley.

Dr. LeRoy S. Brooks of San Francisco, as guest speaker, gave a very interesting and instructive discourse upon the subject of *Acute Intestinal Obstruction*. His able presentation of this subject was appreciated by the members present.

W. C. SHIPLEY, *Secretary*.

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STANISLAUS COUNTY

The regular monthly meeting of the Stanislaus County Medical Society was held at the Hotel Modesto on December 13, 1932. Twelve members were present.

A letter was received from the Yosemite District Dental Society inviting the members of the Stanislaus County Medical Society to meet with them on January 13. The invitation was accepted. The society was asked to furnish the speaker.

Dr. Shephard of San Jose gave a talk on *Diseases of the Thyroid*.

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The regular monthly meeting of the Stanislaus County Medical Society was held at the Hotel Modesto on January 13. They were guests of the dental

society. Twenty-one members of the medical society were present.

Doctor Reamer asked members of the society to send blanks to their patients who have children of pre-school age (blanks to be given by county health unit) to bring their children to the office for vaccination and inoculation against diphtheria.

Dr. J. L. Hennemuth made application for retired membership in the Stanislaus County Medical Society and state society. He had first become a member in the Stanislaus County Medical Society in 1895.

It was moved by Doctor DeLappe, seconded by Doctor Surryhne, and carried unanimously by the members of the society, that this application be accepted.

New committees were appointed as follows:

Program Committee—Marion Collins, R. D. Husband, and R. S. Hiatt.

Membership Committee—N. B. Gould, C. E. Benson, and E. G. Allen.

Public Relations Committee—F. R. DeLappe, E. V. Falk, and R. E. Maxwell.

County Hospital Committee—E. R. McPheeters, J. F. Collins, and A. M. Roscoe.

Medical Economics Committee—Hans Hartman, H. B. Stewart, L. O. Wissner.

History and Obituaries Committee—F. R. McKibbin, J. A. Armistead, and E. F. Reamer.

Public Policy and Legislation Committee—F. R. DeLappe, J. A. Cooper, and J. K. Morris.

The speaker of the evening, Dr. Emil Holman, gave a very interesting talk on *Infections of the Jaw*.

J. A. PORTER, *Acting Secretary*.

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TULARE COUNTY

The Tulare County Medical Society met at Motley's Café in Visalia on December 18, 1932. Following dinner the meeting was called to order by Dr. S. S. Ginsburg, president.

Election of officers for the ensuing year and general discussion of society problems followed.

Elected to office were the following members: President, Frank Kohn of Tulare; vice-president, Donald C. Fowler of Exeter; secretary-treasurer, Karl F. Weiss of Visalia. Censors: J. Hicks of Tulare (one year), E. R. Zumwalt of Tulare (two years), R. C. Hill of Exeter (three years). Delegate, S. S. Ginsburg of Visalia. Alternate, Frank Kohn of Tulare.

The newly elected members will take office at the first meeting in 1933.

The following reports and problems were brought before the society:

A communication was read from Mrs. Banks, gratefully acknowledging expressions of sympathy at the death of Dr. J. Harvey Banks.

Doctor Parkinson of Tulare presented his application for membership, which was duly referred to the Board of Censors and sent to the California Medical Association office for confirmation.

The question of local society dues was discussed and voted to be kept at \$10, as in the past.

It was moved to appoint a hospital committee to study and elaborate a plan for a consultant staff to the Tulare County Hospital and after such report to collaborate with the county supervisors as to its feasibility. Discussion following was unanimous in advising the continuance of a paid medical head at the County Hospital, under which such a proposed staff could work.

The problem of the costs of medical care, as recently surveyed, was referred to the Committee on Public Relations for continued report.

Doctor Preston brought up the question of establishing venereal disease clinics in several cities in the county, and a motion was made to appoint a committee to investigate the feasibility of such plan and ways and means of conducting such clinics if established.

The secretary was instructed to send a protest to the Joint Congressional Investigating Committee on Veterans' Legislation.

The following members were in attendance: Doctors Fowler, Betts, Johnstone, Preston, Kohn, Weiss, Zumwalt, Ginsburg, Hicks, Lipson, Guido, Barber, Brigham, and Hill.

Guests of the society were: Doctors Watke and Parkinson of Tulare and Doctor Mitchell of Dinuba.

KARL F. WEISS, *Secretary*.



VENTURA COUNTY

The monthly meeting of the Ventura County Medical Society was held in the Clinic building of the Ventura County Hospital on January 10. Dr. F. Royal Hendricks called the meeting to order at 8 p. m.

Members present were: Doctors Osborn, Illick, W. S. Clark, Armistead, Little, Jones, Homer, Charles Smolt, D. G. Clark, Mosher, Drace, Lillian Smolt, Hendricks, and Felberbaum. Guests present were: Doctors Neville T. Usher and Daniel M. Clark of Santa Barbara.

Doctor Hendricks introduced Doctor Ussher, who gave an interesting paper and case reports on *Visceral Disturbances in Relation to Spinal Curvatures*, which was followed by a discussion.

Dr. Dan Clark, speaking on behalf of the Santa Barbara County Medical Society, invited the members of the Ventura County Medical Society as guests on January 17 to hear Doctor Bumpers of Rochester, Minnesota.

The Public Relations Committee, of which Doctor Mosher is chairman, was requested to have their report on the medical service plan for the February meeting.

WILLIAM FELBERBAUM, *Secretary-Treasurer*.



YUBA-SUTTER COUNTIES

The following are the officers elected to serve the Yuba-Sutter County Medical Society for the year 1933: President, T. E. Larner of Marysville; vice-president, N. E. Richardson of Yuba City; secretary, F. W. Didier of Wheatland.

Board of Censors—Smith McMullin of Yuba City, Lucien Hamilton and C. P. Crutchett of Marysville.

Entertainment Committee—J. A. Duncan, F. P. Wisner and O. H. Perry, all of Marysville.

Public Relations Committee—Allen Gray, G. S. Delamere and P. B. Hoffman, all of Marysville.

Delegate to California Medical Association, E. E. Gray; alternate, N. E. Richardson.

F. W. DIDIER, *Secretary*.

CHANGES IN MEMBERSHIP

New Members (5)

Monterey County.—Charles A. Galligan, Jr.

San Bernardino County.—Irwin S. Miller.

San Francisco County.—Samuel Cohn.

Santa Barbara County.—Arthur Bruce Steele.

Yuba-Sutter County.—Oliver H. Perry.

Transferred (7)

Alton C. Atwood, from Santa Cruz to Merced County.

Florence A. Brown, from Fresno to Orange County.

Earl H. Gray, from Yolo-Colusa-Glenn to San Mateo County.

Ralph D. Howe, from San Mateo to Yolo-Colusa-Glenn County.

Edward A. Jackson, from Los Angeles to Merced County.

Chester F. Johnson, from San Mateo to Alameda County.

Edouard S. Loizeaux, from Mendocino to San Diego County.

Resigned (1)

Paul A. Gliebe, from San Francisco County.

In Memoriam

Crowley, Thomas Joseph. Died in San Mateo, December 23, 1932, age 63 years. Graduate of the University of California Medical School, San Francisco, 1898. Licensed in California, 1898. Doctor Crowley was a member of the San Mateo County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.



Dufficy, Rafael Gabriel. Died in San Rafael, December 22, 1932, age 47 years. Graduate of the College of Physicians and Surgeons of San Francisco, 1911. Licensed in California, 1911. Doctor Dufficy was a member of the Marin County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.



Herrick, LeRoy Francis. Died in Berkeley, December 19, 1932, age 71 years. Graduate of Kentucky School of Medicine, Louisville, 1893, California Eclectic Medical College, Los Angeles, 1894. Licensed in California, 1901. Doctor Herrick was a member of the Alameda County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.



Price, Merton J. Died in San Francisco, December 23, 1932, age 44 years. Graduate of Stanford University School of Medicine, San Francisco, 1916. Licensed in California, 1916. Doctor Price was a member of the San Francisco County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.



Rooney, Robert Fleming. Died in Auburn, December 22, 1932, age 90 years. Graduate of McGill University Faculty of Medicine, Montreal, 1870. Licensed in California, 1877. Doctor Rooney was a member of the Placer County Medical Society, an honorary member of the California Medical Association, and a Fellow of the American Medical Association.

OBITUARIES

Robert Fleming Rooney

Born in Melbourne, Province of Quebec, Canada, June 17, 1842. Died in Auburn, California, following a cerebral hemorrhage, December 21, 1932.

Robert Fleming Rooney received his preprofessional training at Compton Academy, Compton, Province of Quebec, and at Bishop College Preparatory School, Lennoxville, Province of Quebec. He was graduated in medicine from McGill University March 31, 1870. For some years he practiced in Massawippi and Stanstead Plain, and in 1877 came to California, where he practiced in Colusa until May, 1878, when he located in Colfax, Placer County. In December, 1881, he moved from Colfax to Auburn, in which city he has practiced for fifty-one years.

Doctor Rooney was the moving spirit in the formation of the Placer County Medical Society in 1889, and for eighteen years was its secretary. He also served as president of the Northern California District Medical Society. At the Riverside meeting of the California Medical Association in 1905, Doctor Rooney was elected president and served for two terms, 1905-1907.

Six years ago the writer, in collaboration with Doctor Rooney, wrote for the Committee on History



Robert Fleming Rooney
1842-1932

of the California Medical Association the medical history of Placer County. In reality, Doctor Rooney wrote the history and, with characteristic modesty, neglected to mention in any way his own work, which exceeded in interest and importance that of any of the other older practitioners. The writer's efforts consisted merely in adding a short history of Doctor Rooney. In part the history reads as follows:

"Dr. Robert F. Rooney was for many years one of the most prominent physicians of Northern California. Possessed of a splendid mind, blessed with a genial, kindly manner, always a student, ever ready to answer the call for aid, whether coming from a patient or a brother physician, he was and is beloved alike by the laity and his professional colleagues.

"The writer came to Placer County in 1899, when the doctor was still actively engaged in professional work. At that time Doctor Rooney was the chief consultant for a very large section of Placer County and parts of Nevada and El Dorado counties. It was with pleasure to himself and with profit to his clients that the writer frequently sought the counsel of Doctor Rooney, and he shall never forget the kindly bedside manner, the thorough painstaking methods of examination, the wise counsel and the high professional standards of his older brother practitioner. Never did the doctor refuse a call for assistance and never did he fail to uphold his younger confrère before his client and family. Differences of opinion and friendly advice were reserved for the quiet of private conversation.

"The doctor still practices medicine in Auburn. His step is not so brisk, his eye perhaps not so keen, nor his hand so steady, but his mind retains its brightness, his tongue has not lost its ready wit, and his heart still beats true. He is still the guide and friend of numerous families in Placer County. It is always a joy to the writer to meet him and it is with regret that he feels the limitation of his vocabulary in attempting to write this sketch so as to do justice to the subject. He can do no better in closing than to say that the general practitioner of the old school, the general practitioner whose praises we hear sung today, the general practitioner whose passing we so regret, is well exemplified by the subject of this sketch, Dr. Robert F. Rooney, 84 years young, general practitioner of Auburn, Placer County, California."

Doctor Rooney was active until the last. His illness was short and painless, as he would have wished. Funeral services were held in the Masonic Temple, Auburn, Friday, December 21. The county medical society was represented by the president and secretary, the California Medical Association by the councilor of the eighth district, and past president Junius B. Harris.

ROBERT A. PEERS.



Merton Price
1888-1932

The sudden death of Dr. Merton Price on December 23, 1932, from pneumonia, struck both the medical profession and his many friends with peculiar poignancy.

He was in the prime of life, an acknowledged leader of his profession and a master of his specialty. These are elements that lend regret and sadness to any man's demise. Added to this, however, is the knowledge that a personality of profound sincerity, absolute sense of justice and unbounded charity has gone from among us.

No man could know Doctor Price without becoming aware of his peculiar forcefulness of character. He was essentially a leader, a constructive thinker, and a man of action. His efforts, however, were so divorced from self-interest that their very character bespoke his nature. Doctor Price could be both direct and candid, yet there was another feature of his character exemplified best in his work with little children. Here he displayed a constant tenderness, a sympathy and ineffable sweetness of nature. How many parents of children, in their hour of need, relied upon his skill, and how well they knew how gently and how charitably his hands could work.

Doctor Price's interests were many and varied. Civic affairs, medical problems, and the pursuit of sport all engaged his attention, and to them he brought a freshness of outlook and an enthusiasm of action that was delightful to witness. No better companion could a man have by trout stream or camp fire!

Doctor Price was born in San Francisco in 1888. He attended Lowell High School and received his A. B. degree at Stanford University in 1912. He was graduated in medicine from Stanford in 1916. His internship was served at Saint Luke's Hospital in San Francisco and immediately thereafter he entered the World War as a lieutenant in the United States Navy. Following the war, he specialized in ear, nose, and throat work at the Manhattan Eye, Ear, Nose, and Throat Clinic and then returned to San Francisco to engage in the practice of his specialty.

Doctor Price was a member of the staffs of Stanford, Saint Francis, and Children's hospitals, and was the ear, nose, and throat consultant at the United States Marine Hospital. He became a member of the San Francisco County Medical Society in 1922, and he was recently elected to our board of directors and as an alternate delegate to the American Medical Association. He was the organizer of the Section of Medical Economics and Public Relations and chairman of the Insurance Committee of our society, and he worked untiringly for the betterment of medicine in this community.

Doctor Price was a member of the Phi Delta Theta and Nu Sigma Nu medical fraternities and the

Olympic, Commonwealth, and Rotary clubs. His death has left us devoid of a beloved comrade and able leader.



James Gordon Baird
1846-1932

Dr. James Gordon Baird, one of Riverside's pioneer citizens, opening offices in 1890 with Doctor Charlesworth, was born October 20, 1846, in Carleton County, Ontario, Canada. He received his M. D. degree from the McGill Medical College of Montreal, and after nineteen years of successful practice in Carleton County he went to London, England, where he specialized on diseases of the eye, ear, nose, and throat.

He was for many years a member of the American Medical Association and of the state and county medical societies, joining the latter as a charter member on May 13, 1893, and being enrolled as an honorary member on May 11, 1931.

Doctor Baird is survived by his wife and a daughter.

On learning of the death of Doctor Baird, the Riverside County Medical Society passed the following resolution:

"The Riverside County Medical Society has learned with deep regret of the loss of one of its pioneer members—Dr. James Gordon Baird, who passed away on December 2, 1932.

"Doctor Baird, even up to a short time of his death, attended the medical meetings of this society and was ever ready to contribute his ripe experience for the benefit of his fellow members. We will greatly miss his genial smile and kindly words as we gather for future meetings.

"Doctor Baird had the honor of being the oldest living graduate of medicine of the medical department of McGill University.

"Our sincerest sympathy is extended to Mrs. Baird and his daughter, Agnes, and we share with them the grief of his passing.

**THE WOMAN'S AUXILIARY TO THE
CALIFORNIA MEDICAL
ASSOCIATION***

Official Notice

Meeting of the State Board of the Woman's Auxiliary to the California Medical Association.—A meeting of the State Board of the Woman's Auxiliary to the California Medical Association will be held in Los Angeles on February 17 at 10 a. m. at the Biltmore Hotel.

ETTA ESTILL ALDEN, *Secretary Pro Tem.*

Component County Auxiliaries

Orange County.—Mrs. F. E. Coulter's home was the scene for the regular December meeting of the Woman's Auxiliary to the Orange County Medical Society.

The president, Mrs. Dexter Ball, opened the meeting by introducing the guest of honor, Mrs. James F. Percy, who is the present national president.

Information was given concerning the essay contest open to the members of the Woman's Auxiliary.

It was moved and seconded that the subscriptions to *Hygeia* be continued. Those who do not subscribe to it were urged to do so.

Guests were introduced: Mrs. Harrison and Miss Minter, friends of Mrs. Coulter's; Dr. and Mrs. Cutter from Pacific Colony; Mrs. Newman and Mrs. Howard from San Diego; Mrs. Clough, Mrs. Hilliard, and Mrs. Mock from San Bernardino; also Mrs. Bruning, Mrs. Harris, and Mrs. Earle.

* As county auxiliaries to the Woman's Auxiliary to the California Medical Association are formed, the names of their officers should be forwarded to Mrs. Clifford A. Wright, chairman of the Publicity and Publications Committee, 454 South Irving Boulevard, Los Angeles. Brief reports of county auxiliary meetings will be welcomed by Mrs. Wright and must be sent to her before publication takes place in this column. For lists of state and county officers, see advertising page 6. The Council of the California Medical Association has instructed the editors to allocate one page in every issue for Woman's Auxiliary notes.

The Speakers' Bureau has compiled a letter and given it to the medical society, asking that there be no hesitancy among them in giving the bureau information as to who will be willing to speak at our meetings.

The Nominating Committee submitted the following report: Mrs. Charles S. O'Toole, president; Mrs. Hiram Currey, vice-president-elect; Mrs. F. L. Chapline, first vice-president; Mrs. Newell Moore, secretary; Mrs. R. C. Green, treasurer. This report was unanimously accepted and the new officers introduced by Mrs. Ball.

Mrs. Percy made a brief talk telling of the work planned for the auxiliary. She thanked the members for the corsage of camelias given her.

Doctor Cutter spoke briefly on some phases of medical work.

Mrs. Newell Moore reviewed *Samaritans of Molokai* by Dutton.

Mrs. Ball thanked all for coöperating with her in last year's work and adjourned the meeting for a delightful tea hour, which was presided over by the hostess, Mrs. Coulter, assisted by Mrs. Currey, Mrs. Huffman, and Mrs. Zaiser.

MILDRED TEDSTROM, *Secretary.*

1 1 1

Mendocino County.—On Friday, December 9, an organization meeting of the Woman's Auxiliary to the Mendocino County Medical Society was held at the home of Mrs. R. A. Cushman at the Mendocino State Hospital, Talmage. Mrs. Cushman was elected president, to serve for the remaining state fiscal year; and Mrs. R. B. Toller, secretary-treasurer. The following signed their names as charter members of the organization: Mesdames Raymond Babcock, Willits; Royal Scudder and P. J. Bowman of Fort Bragg; S. L. Rea, E. C. Bennett, and J. J. Kirwin of Ukiah; R. O. LeBaron, R. A. Cushman, and R. B. Toller of Talmage; and Miss Huntley of Point Arena.

It is planned to hold the next meeting the latter part of February or the first of March, when election of officers and committees and the adoption of a constitution will be completed. It was the general opinion that meetings should be held not more frequently than four times a year, since members live so many miles apart.

The program for the meeting consisted of a tour through the State Hospital in the afternoon, dinner with the county medical society at the home of Dr. and Mrs. Cushman at 6:30, and a dance in the hospital auditorium in the evening for those who cared to attend.

Mrs. Henry Rogers of Petaluma, former state president of the auxiliary, was a welcome out-of-town guest, and made a brief talk on the aims and purposes of the auxiliary.

The meeting was a very happy and successful one in making physicians' families better acquainted, and it is hoped and expected that the organization will be most interesting and beneficial in uniting members in a bond of friendship and proving its usefulness as the need may arise.

MRS. R. B. TOLLER, *Secretary.*

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Riverside County.—The Woman's Auxiliary of the Riverside County Medical Society met Monday evening at the home of Mrs. S. H. Keller on Eighth Street, with Mrs. B. E. Garrison and Mrs. T. A. Card as co-hostesses for the evening. Sixteen women were present for the meeting, over which Mrs. A. W. Walker, president, presided. During the session the constitution was discussed.

Reports of chairmen were given as follows: Mrs. E. P. Miller, membership; Mrs. W. W. Roblee, program; Mrs. C. Van Zwahlenburg, hospitality; Mrs. T. A. Card, hostesses; Mrs. S. H. Keller, publicity; Mrs. R. M. Smith, telephone.

The Riverside County Auxiliary submitted the following program for 1933:

January—Our Hospital. (a) Organization and Economics, Miss Vogles, superintendent. (b) Staff Organization and what It Means to the Patient, Doctor

Van Zwalenburg. (c) Hospital Auxiliary—Organization and Service, Mrs. Moulton, president.

February—Joint dinner meeting. Proposed Medical Legislation, Dr. Joseph King, president State Medical Association. Some Economic Problems Facing the Medical Profession, Doctor Roblee.

March—Public Health Problems in Riverside County in Relation to the Doctors, Doctor Wells, health officer. Nursing Services in Riverside, Miss Fraser.

April—Social meeting.

May—Education of a Doctor's Wife—Prize papers from the state meeting. What Can I Do to Help? Mrs. Clark. Discussion led by Mrs. Van Zwalenburg and Mrs. Card.

June—Open meeting with the doctors.

October—Quackery and the Public—What Can This Organization Do? Doctor Adams

November—Medical Propaganda—True and False, Dr. George H. Kress.

December—Annual meeting. Election of officers.

IRENE S. BALL, *Secretary*.

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Santa Barbara County.—The annual meeting of the Santa Barbara Woman's Auxiliary was held on January 9 in the form of a luncheon at El Paseo, with Mrs. Coulter as guest speaker, and Mrs. W. H. Eaton presiding.

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Alameda County.—The regular meeting of the Woman's Auxiliary to the Alameda County Medical Association was held at the Woman's Athletic Club, Oakland, November 18. For the past year the members have met for luncheon and fellowship, and after a brief business meeting the president, Mrs. Thomas Clark, presented an entertaining and instructive program.

As this was the last meeting of the year, reports were read which showed progress and greater interest in the work of the auxiliary. In the election which followed, Mrs. Charles Dukes was elected president for the ensuing year.

The program for the day was given by two of the members. Mrs. J. Dwight Wilson read a very interesting and instructive paper on *Highlights of Medicine in the Last Fifty Years*. Mrs. Robert Sutherland's paper on the *Life of Louis Pasteur* was received with great interest and awakened in the minds of many a desire to know more of his life's work.

MRS. ROBERT SUTHERLAND, *Publicity Chairman*.

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Los Angeles County.—The annual meeting of the Woman's Auxiliary to the Los Angeles County Medical Society was held at the Ambassador Hotel on December 15, 1932. Luncheon preceded the business meeting and delightful musical program.

Mrs. Philip Schuyler Doane, the outgoing president, presided.

Dr. Joseph M. King, Dr. William R. Molony, Mrs. James F. Percy, and Mrs. Frank E. Coulter were guests of honor. Dr. William Mock, president of the Arkansas Medical Society, a visitor in Los Angeles, was also a guest.

Mrs. Doane paid a beautiful tribute to our deceased members in an *In Memoriam*, reading the names of those who have gone. With the audience standing, Zaruhi Elmassian sang "Crossing the Bar," Mrs. Orrie Grist accompanying.

The musical numbers given by Zaruhi Elmassian, lyric soprano, were "Indian Trumpeter," and "Lone Star."

The newly elected officers for the coming year are: President, Mrs. A. Bennett Cook; first vice-president, Mrs. Paul A. Quaintance; second vice-president, Mrs. James L. Halcose of Long Beach; secretary, Mrs. P. O. Sundin; Mrs. A. Brockway and Mrs. Harry J. Wiley of Huntington Park, directors. Those filling unexpired terms are: Mrs. H. Waldo Spiers, treasurer, and Mesdames Alvin G. Foord, David G. Ghrist, Donald B. Garstang, and Clifford Wright.

NEVADA STATE MEDICAL ASSOCIATION

O. HOVENDEN, McGillPresident
D. A. SMITH, Mina.....President-Elect
J. N. VAN METER, Las VegasFirst Vice-President
FLEET H. HARRISON, Minden.....Second Vice-President
HORACE J. BROWN.....Secretary

COMPONENT COUNTY MEDICAL SOCIETIES

WASHOE COUNTY

The Washoe County Medical Society held its regular monthly meeting in the State Building, Reno, January 10.

A tentative discussion was participated in by the members with reference to the Medico-Legal Committee.

The president, Dr. A. R. DaCosta, appointed Doctors M. A. Robison, J. LaRue Robinson, and Donald Maclean to assist the two regular members of the society residing at Carson.

By reason of a slight misunderstanding, it was decided to switch the regular program, which called for a symposium on the subject of pneumonia, to the February meeting. In lieu of the program as intended, the society had the pleasure of seeing a cinema, furnished by the *American Journal of Cancer* of New York, on the subject of "Skin Cancer." The cinema was very exhaustive, covering the entire subject, showing how easily a simple lesion of the skin can be overlooked until it assumes a malignant condition beyond the control of any known medical or surgical means to effect a cure. The cinema teaches a very good lesson, and physicians seeing these cases before they assume malignancy should urge their patients not to tolerate any lesion of the skin but to take such immediate measures as can offer a cure.

The cinema was greatly enjoyed and commented on very favorably by the members.

THOMAS W. BATH, *Secretary*.

Use of Tuberculin in Ophthalmology.—Eggston believes that the ocular lesions frequently diagnosed as tuberculosis in a patient with positive reactions to tuberculin are really not due to infection by tuberculous bacteria, with the formation of a tubercle, but are of an allergic nature, if they are in any way related to tuberculosis. Actual tuberculous infection of the eye is relatively rare. Injections of tuberculin are of value in the allergic cases, if given properly in order to desensitize the patient, but of questionable value in active tuberculous patients. Tuberculin is the foreign protein of choice if the cellular metabolic mechanism of the tissue is to be excited, as a greater response occurs to a protein if there is cellular sensitization.—*American Journal of Ophthalmology*.

British Tribute to W. S. Thayer.—The death of W. S. Thayer is much regretted in this country, where he had many friends and was regarded as the successor to Osler in America. He was one of the only three foreign honorary members of the Association of Physicians of Great Britain and Ireland. His literary powers were especially admired. In 1927 he gave the address "Richard Bright: The Man and the Physician" at the centenary celebration at Guy's Hospital of the publication of the first volume of that great clinician's "Reports of Medical Cases." Dr. J. W. McNee describes him as "a physician of the old cultured general school, carrying on nobly the tradition begun at Johns Hopkins by his medical hero, chief and friend, William Osler."—*Journal of the American Medical Association*, Volume 100, No. 4.

MISCELLANY

Under this department are ordinarily grouped: News; Medical Economics; Correspondence; Twenty-five Years Ago column; Department of Public Health; California Board of Medical Examiners; and other columns as occasion may warrant. Items for the News column must be furnished by the fifteenth of the preceding month. For Book Reviews, see index on the front cover, under Miscellany.

NEWS

Coming Meetings—

American Medical Association, Milwaukee, Wisconsin, June 12-16, 1933, Olin West, M. D., 535 North Dearborn Street, Chicago, Secretary.

Annual Congress on Medical Education, Medical Licensure and Hospitals, Chicago, February 13-14, W. D. Cutter, M. D., Council on Medical Education and Hospitals, 535 North Dearborn Street, Chicago, Secretary.

California Medical Association, Del Monte, April 24-27, 1933, Emma W. Pope, M. D., 450 Sutter Street, San Francisco, Secretary.

Pacific Coast Surgical Association, Del Monte, February 23-25, 1933, Edgar L. Gilcreest, M. D., 384 Post Street, San Francisco, Secretary.

Medical Broadcasts—

American Medical Association Health Talks.—The American Medical Association broadcasts on Monday and Wednesday from 9:45 to 9:50 a. m. (central standard time) over station WBBM (770 kilocycles, or 389.4 meters).

There is also a fifteen-minute talk sponsored by the association on Saturday morning from 9:45 to 10 over station WBBM.

San Francisco County Medical Society.—The San Francisco County Medical Society broadcasts every Tuesday from station KFRC, 4 to 4:15 p. m., and over station KJBS from 11:15 to 11:30 a. m.

Los Angeles County Medical Association.—The radio broadcast program for the Los Angeles County Medical Association for the month of February is as follows:

Tuesday, February 7—KFI, 11:30 to 11:45 a. m., and KECA, 11:45 to 12 noon. Subject: That Word Food.

Tuesday, February 14—KFI, 11:30 to 11:45 a. m., and KECA, 11:45 to 12 noon. Subject: The Battle of the Children.

Tuesday, February 21—KFI, 11:30 to 11:45 a. m., and KECA, 11:45 to 12 noon. Subject: The Nervous Child.

Tuesday, February 28—KFI, 11:30 to 11:45 a. m., and KECA, 11:45 to 12 noon. Subject: The Surgeon.

Foreign Honor to Dr. Sven Lokrantz.—The prized Royal Order of the North Star was recently conferred upon Dr. Sven Lokrantz, director of health, Los Angeles City Schools, by the King of Sweden. The Order of the North Star is given to men who have made contributions to science. Doctor Lokrantz had previously received the Order of Vasa for his outstanding child health work. During the Olympic Games Doctor Lokrantz was medical director of the Games and did much toward the success of that outstanding gathering of world athletes.

American College of Physicians.—The Southern California members gave a dinner in honor of Dr. F. M. Pottenger, president of the college, at the California Club, Los Angeles, January 12. Dr. David Barr, professor of Medicine at Washington University, St. Louis, the guest speaker, delivered the address of the evening.

State Board Appointments.—A news dispatch of January 17 announced the appointment by Governor James Rolph, Jr., of Dr. Percy Magan of Los Angeles to the California State Board of Medical Examiners, and of Dr. George H. Kress of Los Angeles to the California State Board of Health.

Western Hospital Association Meeting, Long Beach, February 22-25, 1933.—The tentative program for a "100 per cent economic convention" indicates an interesting session. Literature giving full information may be had by addressing Western Hospital Association Convention, 130 South Broadway, Los Angeles.

International Medical Postgraduate Courses in Berlin.—These are arranged with the help of the medical faculty of the university by the Lecturers' Association for medical continuation courses and the Kaiserin Friedrich-Haus. For the autumn, 1933, the following courses are contemplated to be held: endocrinology and senile diseases; thorax surgery; malignant tumescence under due consideration of early diagnosis; narcosis and alleviation of pain; the theory of colloids in connection with medicine; course on children's diseases; course for ophthalmologists; course on hereditary biology and the theory of constitution; orthopedic course.

The information bureau of the Kaiserin Friedrich-Haus, Berlin NW 7, Robert Koch-Platz 7, gives information on all questions relating to the above.

Lengthen Lives.—An average length of life of seventy years can be expected in America without introduction of any radical changes, Dr. Louis Dublin of the staff of the Metropolitan Life Insurance Company said, in speaking before the recent meeting of the American Association for the Advancement of Science. Mortality in the first year of life would be reduced, then, to thirty per one thousand.

Cancer and heart disease are taking a greater toll of deaths, and tuberculosis is accounting for fewer deaths than ever before, Doctor Dublin declared. He said the average span of life has increased remarkably in the past forty or fifty years.

University of California.—Three new appointments on the faculty of the University of California have been announced by President Robert Gordon Sproul, following the January meeting of the regents in the State Building, San Francisco.

The appointments are as follows: C. Weiss, as associate professor of research medicine in the Hooper Foundation for Medical Research; W. H. Kellogg, associate clinical professor of preventive medicine, to the additional post of lecturer in laboratory diagnosis in the department of hygiene, January 1 to June 30, 1933; and Mary M. Pickering, assistant professor of nursing education, as chairman of the newly organized division of nursing education.

Pacific Coast Oto-Ophthalmological Society.—The date of the meeting of the Pacific Coast Oto-Ophthalmological Society has been set for June 28, 29, and 30, 1933, in San Francisco. The officers of the society are: President, Hans Barkan, M. D., San Francisco; first vice-president, Bertram C. Davies, M. D., Los Angeles; second vice-president, Lee B. Bouvy, M. D., La Grande, Oregon; secretary-treasurer, Frederick C. Cordes, M. D., San Francisco.

California Tuberculosis Association.—The annual meeting of the California Tuberculosis Association will be held at Hotel Coronado, Coronado, Friday and Saturday, March 10-11, 1933.

All physicians are cordially invited to attend the sessions and to take part in the discussions. The program follows:

Friday, March 10

9:30 to 12 noon

Joint session: Clinical and Sociological Sections

1. Does the Preventorium Prevent Tuberculosis—E. H. Christopherson, M. D., San Diego.
Discussion by Charles L. Ianne, M. D., San Jose; Thomas C. O'Connor, M. D., Murphy.
2. Racial Tuberculosis—Epidemiological Problems—John Force, M. D., Berkeley.
Discussion by John Sippy, M. D., Stockton; Mildred Thoren, M. D., Weimar; Everett Morris, M. D., Auberry.

12 to 2 p. m.

GROUP LUNCHEON MEETINGS

2 to 5 p. m.

CLINICAL SECTION

1. Bronchoscopy in Tuberculosis—Leland Hunnicutt, M. D., Pasadena.
Discussion by Leo Eloesser, M. D., San Francisco.
2. Mexican Tuberculosis Problem—P. K. Telford, M. D., Los Angeles.
Discussion by W. H. Bucher, M. D., Los Angeles; R. L. Cunningham, M. D., Los Angeles.
3. Criteria of Diagnosis in United States Veterans—Edwin S. Bennett, M. D., Los Angeles.
Discussion by Harold Trimble, M. D., Oakland.
4. Adolescent Tuberculosis—R. H. Sundberg, M. D., San Diego.
Discussion by Chesley Bush, M. D., Livermore.

2 to 5 p. m.

SOCIOLOGICAL SECTION

Health Education—

1. New Approaches to Health Education in the Schools—James Houloose, M. D., Long Beach.
2. Adult Education—Walter Brown, M. D., Stanford University.
3. Assistance to Be Rendered Official Agency by Voluntary Agency in Health Education—J. D. Dunshee, M. D., Pasadena.
4. Informing the Public—Mr. Paul Edwards, Editor-in-Chief, San Diego Sun.

7 p. m.

ANNUAL BANQUET

Report of President—William C. Voorsanger, M. D.
Address—William H. Park, M. D., New York.
Dancing.

Saturday, March 11

9:30 a. m. to 12 noon

CLINICAL SECTION

1. Relation of Endocrine System in the Development of Treatment of Tuberculosis—Hans Lissner, M. D., San Francisco.
Discussion by F. M. Pottenger, M. D., Monrovia.
2. Progress in Tuberculosis Research—Emil Bogen, M. D., Olive View.
Discussion: Filtrable Forms of Tubercle Bacilli—Ernest Walker, M. D., San Francisco.
3. The Evaluation of Laboratory Tests in Determining Activity in Tuberculosis—Philip Pierson, M. D., San Francisco.
Discussion by Harold A. Thompson, M. D., San Diego; J. E. Pottenger, M. D., Monrovia.
4. Nonpulmonary Tuberculosis—Leroy H. Briggs, M. D., San Francisco.
Discussion by Mumford Smith, M. D., Los Angeles.

9:30 a. m. to 12 noon

SOCIOLOGICAL SECTION

Early Diagnosis—

1. Early Diagnosis Campaign—Ethel Owen, M. D., San Francisco.
2. Program in a Rural Community—R. C. Main, M. D., Santa Barbara.
3. Program in a Metropolitan Community—A. Hieronymus, M. D., Oakland.
4. Coordination of Family Case Work and Tuberculosis Case Finding—Miss Mary Stanton, Los Angeles.

12:15 to 1:45 p. m.

ANNUAL BUSINESS MEETING

2 to 5 p. m.

X-RAY EXHIBIT AND SYMPOSIUM

Lycl C. Kinney, M. D., San Diego, Chairman

You are requested to bring any interesting films for discussion. If you wish to present a discussion, please notify the chairman in advance of the meeting.

8 p. m.

EVENING SESSION

1. B. C. G. Immunization—William H. Park, M. D., New York Board of Health; Camille Kereszturi, M. D., New York.

CORRESPONDENCE

Subject of Following Letter: Fresno Smallpox Epidemic of Year 1925

To the Editor:—In the November issue of CALIFORNIA AND WESTERN MEDICINE, under the title of "The Lure of Medical History," appears a short review of the Fresno smallpox epidemic of 1925.

I was the State Board of Health representative detailed to Fresno during this epidemic, and feel that Doctor Robinson has not given sufficient prominence to this very serious outbreak. Undoubtedly the figures were not available to Doctor Robinson at the time of writing the article. I find that the figures given are far from accurate, and am taking this opportunity to quote from my report to the State Board of Health regarding this epidemic in order that the historical facts may not be forgotten.

The first appearance of smallpox in the region around Fresno was in the town of Clovis, about ten miles north of Fresno. The health officer of Clovis, Dr. M. S. Montgomery, described the outbreak as having occurred in the latter part of August, 1924, among itinerant fruit pickers, and that it was decidedly more virulent than any he had ever seen before. There were twenty-one cases in all, many of which were sent to the County Hospital at Fresno. Doctor Montgomery promptly instituted a vaccination campaign, during which fully seven hundred were inoculated. This was about 50 per cent of the population. No further cases developed, and as no records were kept further study of this Clovis outbreak was not possible.

The first cases appeared in Fresno shortly after the Clovis outbreak, and the first death in Fresno occurred September 30, 1924. In view of the mildness of the disease that had been prevalent throughout the state for several years, no apprehension on the part of city health authorities was aroused until three deaths in sharp succession in a Mexican family occurred early in October. Then assistance was asked from the State Board of Health. The epidemic continued until November. There were altogether 170 cases and twenty-five deaths from smallpox, and over 102,000 were inoculated.

The fatality rate of 14.7 per cent indicated a very severe type of the disease. In many of the smallpox epidemics experienced in Europe during the two or three centuries preceding Jenner's discovery, a death rate of 10 per cent was occasionally reached. The rare and serious symptoms described by the older writers were frequently seen during the Fresno epidemic. Toxic smallpox, hemorrhagic smallpox, scarlatinaform eruption and variolar abortions all occurred. No prodromal rashes were observed. All sorts of inoculation wounds were seen. An old and pre-antiseptic opinion seemed to have arisen again, namely, that the greater the local reaction the more effective the result. Apparently it was not realized that the area of pitted surface ultimately secured bore no relation whatever to the degree of local reaction. "The more severe the local reaction the better the take" was heard so frequently that people very often hesitated to be inoculated, rightly fearing a severe local reaction as much as they feared the smallpox itself. The method advocated by the State Board of Health about ten years previously was used in all official inoculations by the health departments. Three areas of about one-tenth

Inoculations of Smallpox Vaccine—Fresno Epidemic, 1924-1925					
Location of Clinic	In Charge of	Clinic		Inoculated	Totals
		Opened	Closed		
City of Fresno	City H. O.	September 29, 1924	November 28, 1924	20,812	
Private offices	Dr. C. Mathewson	September-October	November, 1924	19,849	
Fresno County	Physicians of Fresno				
Private offices	County H. O.	October 20	December 31	22,230	
	Dr. G. C. Long	October-November	December	4,671	
	Physicians of County				
Total inoculated within Fresno County.....					67,562
Tulare County	Dr. G. J. Telfer	October and November		14,034	
Kings County	Dr. G. J. Telfer	October and November		8,208	
Madera County	Dr. G. J. Telfer	October and November		5,088	
Merced County	Dr. G. J. Telfer	October and November		5,000	
*Sacramento County	Dr. W. W. Cress	November		2,730	
Total in other counties					35,060
Total inoculations					102,622
* One case of virulent smallpox in Sacramento was traced to Fresno and inoculations followed.					

of an inch in diameter were denuded, extending down into the Malpighian layer of the derma, and very seldom resulted in any bleeding. Fresh vaccine was applied to these denuded areas and the wounds immediately covered with two or three layers of aseptic gauze, held in place by adhesive plaster. The reaction was observed on the eighth day and fresh gauze applied. No serious results were observed when this method was followed. Many persons who were successfully inoculated by this method were hard to convince that they had been successfully immunized. "But my arm never hurt me" was heard innumerable times.

The relation of immunization to protection against smallpox bore out the evidence that history has repeatedly demonstrated since the days of Jenner.

	Recoveries	Deaths
History unknown	1	5
Never successfully immunized	129	16
Successfully immunized under five years ..	1	....
Successfully immunized five to ten years ..	5	....
Successfully immunized over ten years....	9	4
Totals	145	25

Many cases were seen where a typical vaccinia developed at the same time that an unmodified smallpox rash grew, indicating that the unfortunate victim had been inoculated just two or three days too late after having been infected with smallpox. So far as observed, these late inoculations did not seem to have any influence upon the severity of the attack. All who had passed through the maximum stage of their vaccine inoculation before being exposed, or before the incubation period of smallpox had passed after having been exposed, were protected against the disease and did not get it. This amply demonstrated the statement that "an immune person cannot develop smallpox." Immunity was occasionally found to have been shortened in certain individuals to a few years, probably dependent on some peculiar systemic conditions possessed by these particular persons; however, I never found immunity to have been shortened to less than three years.

Yours very truly,

ALLEN F. GILLIHAN, M. D.,
County Health Officer.

Subject of Following Letter: Cinch Shortening Operation for Strabismus

To the Editor:—It has recently come to my attention that a story is being circulated to the effect that I have been guilty of a violation of medical ethics in trying to keep secret my cinch shortening operation for the correction of strabismus and other troubles of the ocular muscles.

I hope you will publish this statement, as I know of no other way to get the facts to all who may have heard the story.

The operation was devised by me in 1911 and reported, after my first operation, in the *Journal of the American Medical Association* for March 2, 1912. I was then in the Army Medical Corps, which afforded but little opportunity to see much muscle work. As stated in the paper, the report was made at once in hopes of interesting some who saw a great deal of that kind of work.

My second paper was in the *Archives of Ophthalmology* for 1914, and later in the same year, at the request of Dr. Casey Wood, I took part in a symposium on the ocular muscles published in the *Ophthalmic Record*. Also, at his request, I furnished a condensed description for the Encyclopedia of Ophthalmology. In 1915 a short paper, with demonstration, was given at the meeting of the Pacific Coast Oto-Ophthalmological Society. The next paper was at the 1916 state medical meeting at Fresno.

The operation was brought up to date by reporting forty-two operations at the 1916 meeting of the American Medical Association at Detroit. While on that trip I operated in Chicago for Dr. Casey Wood, and at the Illinois Eye and Ear for Doctor Orcutt.

Since that year I have read many papers, and at all meetings have been busy demonstrating the principle of the method to anyone interested.

I resigned from the Army in 1914 and started practice in Oakland in 1915. During that year several ophthalmologists brought patients to me and assisted at the operations.

Operations were done at the Knapp Eye Hospital and the Wills Eye Hospital in 1914. In 1930, operations were done for Doctor Orcutt in Chicago during the Academy meeting. In 1931, eight squints were operated at Salt Lake City for the Utah State Medical Society. In November, 1931, a number of operations were done for the Southern Medical Association meeting in New Orleans.

In 1924 Dr. Joseph L. McCool, then of Portland, made a week's visit and assisted at eight or ten operations I had saved up for that purpose, and last December Dr. Donald O'Rourke of Denver made a similar visit for the same purpose.

In view of all these provable facts, I think it is quite apparent that the story of my withholding information concerning the technique of the operation is without foundation in fact.

RODERIC O'CONNOR.
450 Sutter Street, San Francisco.

PRACTICE OF MEDICINE BY CORPORATIONS ILLEGAL IN CALIFORNIA*

Judge Samuel R. Blake of the Superior Court of the State of California, in and for the county of Los Angeles, in the case of

The People of the State of California on the Relation of Granville MacGowan, Plaintiff, vs. Medical Service Corporation, a Corporation, Defendant,

recently rendered a decision that should be of much interest to members of the California Medical Association.

Because of the importance of this particular decision a digest of Judge Blake's opinion, which recently came into the hands of the editor, is here printed:†

POINTS FOR DECISION

1. Two of the main questions involved are:

(a) Can a corporation practice medicine?

(b) Is the manner and method in which the defendant corporation is conducting its business, practicing medicine?

On the first proposition the court concludes that a corporation cannot practice medicine. A corporation may be formed for any purpose for which individuals may lawfully associate themselves.

The defendant's contention is that since doctors may lawfully associate themselves together to practice medicine, likewise it may do so in its corporate capacity as a corporation by employing as its agents qualified physicians and surgeons to do the work of the corporation.

The vice of this contention consists in its assumption that individuals may generally and as a matter of right associate themselves together for the practice of medicine; this assumption is fallacious since, under the laws of California, individuals may not, either singly or in an association, engage in the practice of medicine without having a special license so to do, and hence individuals forming a corporation could not under our law gain any other or further right by the act of incorporation than lawfully possessed by either, singly or in the aggregate, without incorporation.

The corporate cannot, of course, as a corporation, pass the medical board examination and can only act through its agents. The right to practice medicine attaches to the individual and dies with him, and it cannot be made a subject of business sheltered under the cloak of corporation having marketable shares descendable under the laws of inheritance. All the directors of this corporation, or stockholders, may be licensed practitioners, but any time these directors or officers, by death or otherwise, may transfer their shares and it might be succeeded by laymen, none of whom possess the right to practice medicine.

Therefore, under the maxim that you cannot do indirectly, as in this case by the creation of a corporation, that which is directly prohibited by law; upon this proposition the great weight of authority in Cali-

fornia and elsewhere is that a corporation cannot, as such, practice medicine.

IS THE MANNER AND METHOD UNDER WHICH THE DEFENDANT CORPORATION IS CONDUCTING ITS BUSINESS AMOUNTING TO PRACTICING MEDICINE?

The evidence shows that the defendant corporation is engaged in the business of conducting dispensaries throughout the city of Los Angeles, with its principal office located in the Pantages Building, scattered throughout the industrial district. There are six or seven stations where minor industrial injuries not requiring medical attention are treated. Each of these stations has a waiting room and room where treatment is administered. In each of the stations there is an operating table and instruments necessary to enable a physician to give first-aid treatments. These stations are classed as emergency hospitals and are maintained by the agents of the defendant corporation. In each of the stations the defendant maintains one physician (licensed), and these doctors are employed by the corporation on a straight salary, and are paid a small bonus if the company makes a profit from his particular station. The evidence further shows that the corporation confines its activity to purely and entirely industrial cases. The defendant corporation has no nurses at its branches and the only nurse is at the main office. The doctors are at all times employed by the company and the physician and surgeon gives all his time to the defendant corporation. All of the doctors are required to report to a chief surgeon, Doctor Nelson, at the head office. The corporation makes a charge for the services rendered by the doctor whenever a case is closed. The doctor himself makes no charge and the doctors at various stations are not permitted to treat any private cases of their own, and only do the work of the corporation. This is a brief summary of the important facts of the case.

This unquestionably is a case of first impression in the State of California, being a proceeding by the Attorney General to cancel and annul the franchise of this defendant corporation for the reason that they have violated a law of the State of California and engaged in a business as a corporation which it is unlawful to do.

The court concludes that the acts enumerated and done by the defendant corporation constitute practicing a system of medicine, or mode of treating the sick and afflicted in this State, within the meaning of the Medical Practice Act, and, therefore, is in violation of law.

Several other important questions are involved, to wit:

1. Whether or not such a holding affects hospitals and charitable institutions now in existence which are corporations.

Clearly this rule would not in anywise affect hospitals and infirmaries which are not practicing medicine, but are independent of the practice of medicine and surgery, nor are most of those institutions profit-sharing institutions and practicing for profit, while the defendant corporation is, and there is no analogy between the present case and the case of hospitals or other private corporations.

2. The fact that the Workmen's Compensation Act compels all employers to furnish medical and surgical aid to the injured in the course of their employment does not offer any reason for a corporation to engage in the practice of medicine. It only requires that they furnish medical aid of a physician and surgeon, and it is not necessary to form a corporation to furnish a physician and surgeon for medical aid.

If, in the last analysis, corporations are allowed to practice medicine as a general proposition, it is the opening wedge to the commercialization of the practice of the learned profession of medicine, and permits the creeping in of many unethical and uncontrollable factors which the law has heretofore rigidly sought to avoid.

One of the main objections to allowing a corporation to practice medicine would be unquestionably

* Note.—In response to frequent requests for copies of the opinion handed down by Superior Court Judge Samuel R. Blake in 1930, the same is here reprinted.

† At the time Judge Blake gave his opinion from the bench, the daily press, in substance, stated that Judge Blake's order dissolved the franchise of the Medical Service Corporation and perpetually enjoined that particular corporation from practicing medicine.

Of course, in a legal matter with such scope and ramifications, this decision is not apt to be the end of the story. The entire situation will continue to bear watching. In the meantime it is a pleasure to know that a verdict has been handed down from a Superior Court bench on some of the legal phases of this important problem which is concerned with the attempt of certain corporations to practice medicine.

It must be a gratification to all members of the California Medical Association to know that the effort and work of Dr. Granville MacGowan of Los Angeles had such a successful outcome.

the inability of the state to control the practice of medicine by a corporation as it does control it now under the Medical Practice Act, as each member of the profession comes directly under the Medical Practice Act and the corporation herein does not. Unprofessional conduct on behalf of the corporation could not be reached, such as aiding or betraying a professional secret, advertising, or offenses involving moral turpitude, and many others too numerous to mention.

Unquestionably, if the corporation does not come within the provisions of the Medical Practice Act, it would be immune from its penalties or provisions; therefore it is important to the welfare of the people of the State of California, and hence the importance of the prohibiting of a corporation from practicing medicine as a corporation and engaging in that business through its agents for profit.

SAMUEL R. BLAKE, *Judge.*

Attorneys for plaintiff:

U. S. Webb, Attorney General,
Gibson, Dunn & Crutcher, and
Norman S. Sperry.

Attorneys for defendant:

Joe Crider, Jr.

THE NATIONAL INSTITUTE OF HEALTH OF THE UNITED STATES

The National Institute of Health is the research center of the United States Public Health Service. Before May, 1930, the work of the institute was carried on under the name of the Hygienic Laboratory of the United States Public Health Service. Through the provisions of a bill introduced by Senator Joseph E. Ramsdell, at that time United States Senator from Louisiana, the scope of the Hygienic Laboratory was broadened greatly and its name was changed to the National Institute of Health. Since that time Mr. Ramsdell has become executive director of the institute. Dr. George W. McCoy and his associates, who have been in the Hygienic Laboratory for many years, continue their services under the National Institute of Health. The conference board of the institute is an unofficial voluntary organization of public-spirited men who lend their services to assist the Public Health Service to perform its important work in the conservation of public health. Under the present organization of the institute, it is able to accept gifts and benefactions which must be sent to the treasurer of the United States and credited as gifts to the National Institute of Health. Funds so contributed will be expended by the government in accordance with the expressed wishes of the donors. The legal restrictions that have been thrown around such expenditures assure donors that their contributions will be devoted to the purpose intended without any deductions whatsoever for commissions or overhead.

The Hygienic Laboratory came into existence in New York in 1887, but it was transferred to Washington and in 1901 Congress passed an act establishing it as a separate institution under the Public Health Service. It was charged with the "investigation of infectious and contagious diseases and matters pertaining to the public health." In spite of limited financial support, its scientific staff made extremely valuable discoveries relative to such diseases as malaria, hookworm, pellagra, tularemia, undulant fever, psittacosis, typhus, and Rocky Mountain spotted fever. It also has accomplished valuable work in the standardization of drugs and in the solution of fundamental chemical problems.

The institute maintains the same relations toward the Public Health Service that the Hygienic Laboratory has always maintained. The scope of its activities is broadened greatly, however, under its recent reorganization. The institute still receives appropriations by Congress, but it is now enabled to receive support from other sources and thereby accomplish

a much greater amount of work than was possible under its former limited support. The work of the institute has been of particular value to California, as some of its discoveries have been especially valuable in the control of certain communicable diseases in this State. Among these may be mentioned tularemia, psittacosis, typhus, Rocky Mountain spotted fever, and plague. The importance of research in public health is unquestionable. Without the accomplishments that have been made in this institution, as well as in countless other research laboratories throughout the country, it would have been impossible to develop the high standards in public health service which now prevail.

CALIFORNIA SENATE AND ASSEMBLY DISTRICTS

The population statistics and legal classification of counties of California and the maps of senatorial and assembly districts of California are printed in this issue so that county societies may more easily check on their respective districts. The California Legislature now being in session, this information may be found desirable by members who are following the course of proposed laws having to do with the public health.

COUNTIES OF CALIFORNIA

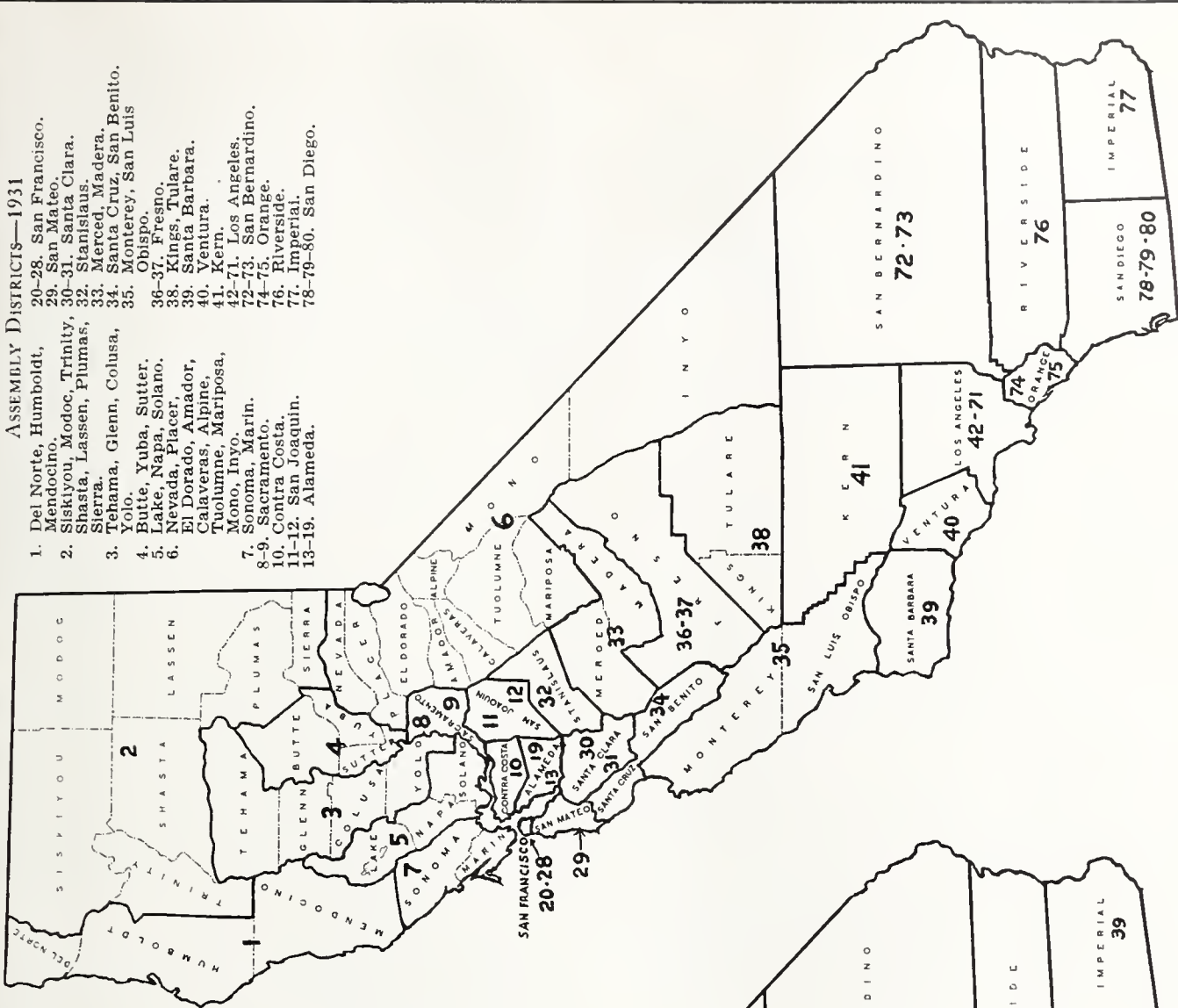
Population Statistics and Legal Classification (California Blue Book)

(Chapter 97, Statutes of 1931)

Class	County	Population	Population, Census 1930
1	Los Angeles	900,000 and over	2,208,492
2	San Francisco	500,000 and under 900,000.....	634,394
3	Alameda	400,000 and under 500,000.....	474,883
4	San Diego	200,000 and under 400,000.....	209,659
5	Santa Clara	145,000 and under 200,000.....	145,118
6	Fresno	143,000 and under 145,000.....	144,379
7	Sacramento	140,000 and under 143,000.....	141,999
8	San Bernardino.....	130,000 and under 140,000.....	133,900
9	Orange	110,000 and under 130,000.....	118,674
10	San Joaquin	100,000 and under 110,000.....	102,940
11	Kern	82,000 and under 100,000.....	82,570
12	Riverside	80,000 and under 82,000.....	81,024
13	Contra Costa	78,000 and under 80,000.....	78,608
14	Tulare	77,425 and under 78,000.....	77,442
15	San Mateo	75,000 and under 77,425.....	77,405
16	Santa Barbara	65,000 and under 75,000.....	65,167
17	Sonoma	62,000 and under 65,000.....	62,222
18	Imperial	60,000 and under 62,000.....	60,903
19	Stanislaus	55,000 and under 60,000.....	56,641
20	Ventura	54,000 and under 55,000.....	54,976
21	Monterey	53,000 and under 54,000.....	53,705
22	Humboldt	43,000 and under 53,000.....	43,233
23	Marin	41,000 and under 43,000.....	41,648
24	Solano	40,000 and under 41,000.....	40,834
25	Santa Cruz	37,000 and under 40,000.....	37,433
26	Merced	35,000 and under 37,000.....	36,748
27	Butte	30,000 and under 35,000.....	34,093
28	San Luis Obispo ..	27,500 and under 30,000.....	29,613
29	Siskiyou	25,400 and under 27,500.....	25,480
30	Kings	25,000 and under 25,400.....	25,385
31	Placer	24,000 and under 25,000.....	24,468
32	Yolo	23,600 and under 24,000.....	23,644
33	Mendocino	23,000 and under 23,600.....	23,505
34	Napa	22,000 and under 23,000.....	22,897
35	Madera	15,000 and under 22,000.....	17,164
36	Sutter	14,000 and under 15,000.....	14,618
37	Shasta	13,900 and under 14,000.....	13,927
38	Tehama	13,000 and under 13,900.....	13,866
39	Lassen	12,000 and under 13,000.....	12,589
40	Yuba	11,325 and under 12,000.....	11,331
41	San Benito	11,000 and under 11,325.....	11,311
42	Glenn	10,750 and under 11,000.....	10,935
43	Nevada	10,500 and under 10,750.....	10,596
44	Colusa	10,250 and under 10,500.....	10,258
45	Tuolumne	9,000 and under 10,250.....	9,271
46	Amador	8,400 and under 9,000.....	8,494
47	El Dorado	8,300 and under 8,400.....	8,325
48	Modoc	8,000 and under 8,300.....	8,038
49	Plumas	7,500 and under 8,000.....	7,913
50	Lake	7,000 and under 7,500.....	7,166
51	Inyo	6,500 and under 7,000.....	6,555
52	Calaveras	6,000 and under 6,500.....	6,008
53	Del Norte	4,000 and under 6,000.....	4,739
54	Mariposa	3,000 and under 4,000.....	3,233
55	Trinity	2,500 and under 3,000.....	2,809
56	Sierra	2,400 and under 2,500.....	2,422
57	Mono	1,000 and under 2,400.....	1,360
58	Alpine	Less than 1,000.....	241

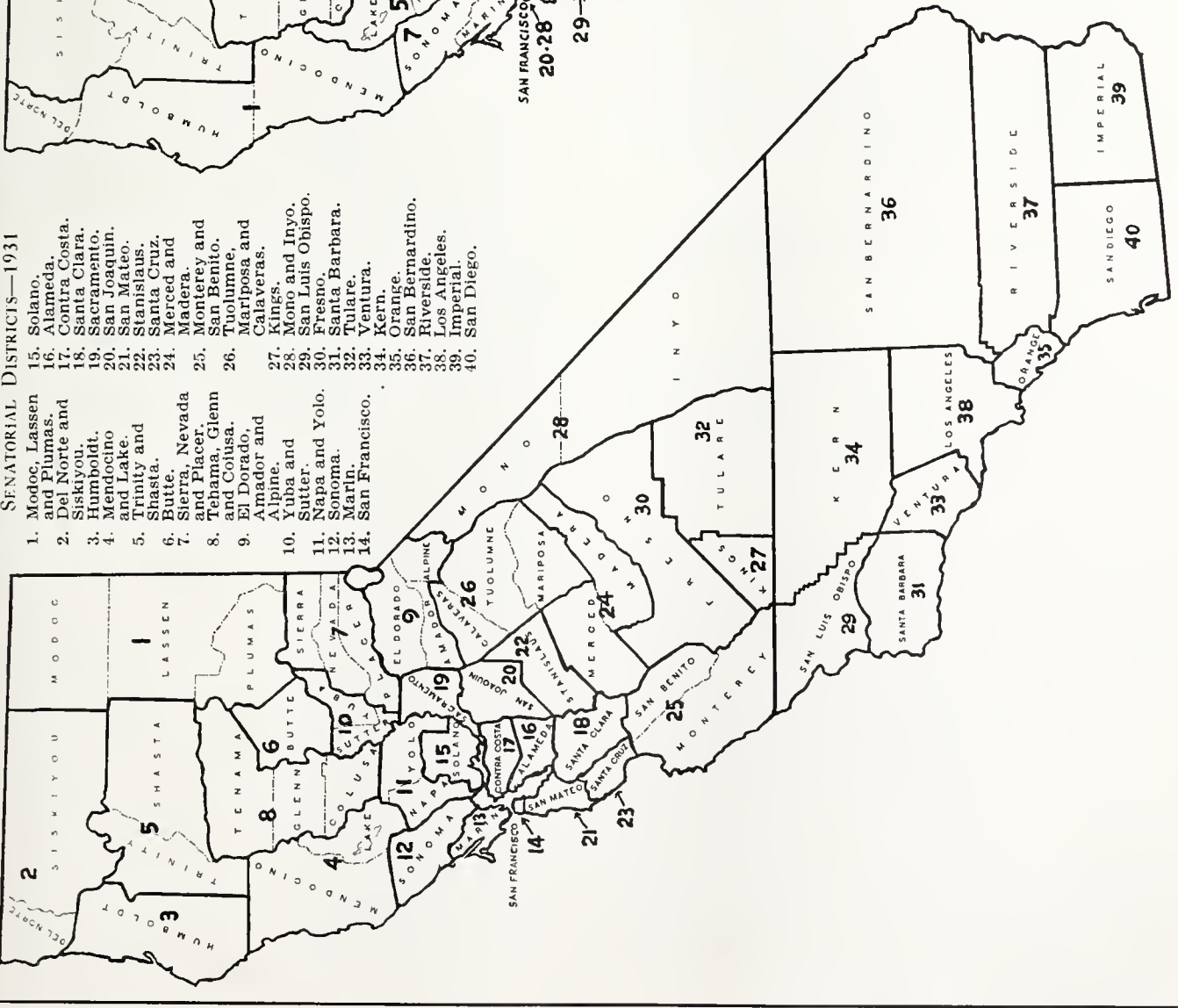
ASSEMBLY DISTRICTS—1931

- 1. Del Norte, Humboldt, Mendocino.
- 2. Siskiyou, Modoc, Trinity, Shasta, Lassen, Plumas, Sierra.
- 3. Tehama, Glenn, Colusa, Yolo.
- 4. Butte, Yuba, Sutter.
- 5. Lake, Napa, Solano.
- 6. Nevada, Placer, El Dorado, Amador, Calaveras, Alpine, Tuolumne, Mariposa, Mono, Inyo.
- 7. Sonoma, Marin.
- 8-9. Sacramento.
- 10. Contra Costa.
- 11-12. San Joaquin.
- 13-19. Alameda.
- 20-28. San Francisco.
- 29. San Mateo.
- 30-31. Santa Clara.
- 32. Stanislaus.
- 33. Merced, Madera.
- 34. Santa Cruz, San Benito.
- 35. Monterey, San Luis Obispo.
- 36-37. Fresno.
- 38. Kings, Tulare.
- 39. Santa Barbara.
- 40. Ventura.
- 41. Kern.
- 42-71. Los Angeles.
- 72-73. San Bernardino.
- 74-75. Orange.
- 76. Riverside.
- 77. Imperial.
- 78-79-80. San Diego.



SENATORIAL DISTRICTS—1931

- 1. Modoc, Lassen and Plumas.
- 2. Del Norte and Siskiyou.
- 3. Humboldt.
- 4. Mendocino and Lake.
- 5. Trinity and Shasta.
- 6. Butte, Nevada and Placer.
- 7. Sierra.
- 8. Tehama, Glenn and Colusa.
- 9. El Dorado, Amador and Alpine.
- 10. Yuba and Sutter.
- 11. Napa and Yolo.
- 12. Sonoma.
- 13. Marin.
- 14. San Francisco.
- 15. Solano.
- 16. Alameda.
- 17. Contra Costa.
- 18. Santa Clara.
- 19. Stanislaus.
- 20. San Joaquin.
- 21. San Mateo.
- 22. Stanislaus.
- 23. Santa Cruz.
- 24. Merced and Madera.
- 25. Monterey and San Benito.
- 26. Tuolumne, Mariposa and Calaveras.
- 27. Kings.
- 28. Mono and Inyo.
- 29. San Luis Obispo.
- 30. Fresno.
- 31. Santa Barbara.
- 32. Tulare.
- 33. Ventura.
- 34. Kern.
- 35. Orange.
- 36. San Bernardino.
- 37. Riverside.
- 38. Los Angeles.
- 39. Imperial.
- 40. San Diego.



MALPRACTICE INSURANCE POLICIES*

A physician's application for a physician's indemnity or liability policy of insurance, or for any other kind of insurance for that matter, is the foundation stone of the validity of the insurance contract. The insuring company's knowledge of the risk it is assuming is derived from the application.

A physician's statements and representations contained and set forth in the physician's answers to the questions in the application blank regarding his practice; his specialty, if any; the extent of his use of radium or x-ray; the number, qualifications, duties, and responsibilities of his assistants; whether or not he is practicing in copartnership; and all other information requested by the company, as shown by its application blank, should *always* be *full, correct, and accurate*.

A malpractice insurance *broker* (and a *broker* usually solicits a physician's business) is *not* a representative of the insurance company. He is the physician's representative.

An *agent* represents the insurance company, and, commonly, an *agent* cannot waive or vary an insurance company's requirements regarding its applications or any clause of its policies.

Therefore, what a physician allows a *broker* to put in the physician's application is the physician's act, and the physician is responsible for any inaccuracies or misinformation which the application may contain when it reaches the insurance company's agents and representatives.

1. A physician should never sign an application blank leaving it to someone else to fill in the answers.

2. A physician should never sign an application blank without reading all the questions and all the answers carefully.

3. A physician should always read the company's blank forms which may be submitted by a broker, and if the physician is in doubt as to any material point, should ask the broker to write to the company and show the answer of the company's representative in reference to the point involved.

FINAL REPORT OF THE COMMISSION ON MEDICAL EDUCATION†

THE PROBLEM OF MEDICAL CARE

The problem of medical care is exceedingly complex. Before substantial progress can be made toward its solution it will be necessary to secure a reasonably clear definition of the present and probable needs of the immediate future for medical services. These vary considerably in the different sections of the country because of local conditions. . . .

THE PRESENT SITUATION

A number of studies by insurance companies, public health organizations, industrial firms, and others indicate that there are about 130,000,000 cases of disabling illness in the United States each year. If non-disabling illness is considered, the figure is about double. Throughout the year an average of about two per cent of the population is incapacitated from illness and twice as many are impaired and handicapped.

The time lost because of illness averages between seven and nine days per employed person and represents about three per cent of the usual working year. It is estimated that the 36,000,000 wage-earners in the country lose about 250,000,000 work-days, and the 24,000,000 school children lose about 175,000,000 days

in school each year from illness. The financial loss to the country as a whole represented by the lost earning power and reduced production totals well over two billion dollars a year, equivalent to one-half the cost of maintaining the national government. The economic features associated with preventable and premature deaths represent a further very large sum. The number of work-days and the amount of wages lost because of illness, while very large, are far exceeded, however, by casual and enforced idleness from other causes. It has not been possible to keep the healthy people employed fully even in times of prosperity. . . .

CURRENT TRENDS IN MEDICAL PRACTICE

Current medical practice has taken on certain characteristics which resemble those of contemporary industrial life. Considerable emphasis is being placed upon organizations as a means of providing mass production in medical services. Efforts are made to standardize procedures partly as a reflection of methods in the field of industry. These efforts are based in many instances upon the fundamental fallacy that the human being, who is the unit of medical service, can be regarded as a uniform, standardized organism. The contrary is known to be the case inasmuch as no two individuals are alike, and no two even with the same disorder react in exactly the same way. Sound medical practice requires careful study of the health needs of each individual—physical, psychic, and social. . . .

SPECIALIZATION

Partly because of the skill required in the use of certain instruments, undue emphasis has been given to the various specialties, a number of which have been developed around technical procedures. There has been an extensive subdivision of labor in the field of practice which requires that group and collective opinions be sought in the diagnosis and treatment of some patients. This subdivision of labor, however, has gone beyond the actual needs of the community and most patients. It has been greatly overdone, especially in the large cities. . . .

THE INCOMES OF PHYSICIANS

Most of the emphasis in recent public discussions of the economic aspects of medical care has been upon the cost to the patient and his family. Frequently the impression is created that physicians are securing an economic advantage at the expense of the public. Not over one-third of the expenditures for medical care is for physicians. The mean income of the doctor is low when consideration is given to the investment of time and money in his training. The risks and uncertainties of practice, the expenses of maintaining proper facilities for practice, and the dependence of his income upon his health and vigor make the economic problem of the average physician precarious, especially in the light of the recent growth of community programs of medical service which often are in competition with him.

Studies indicate that even in recent prosperous times 50 per cent of the physicians in the country received an annual gross income of \$3,800 or less. About 25 per cent of them received \$2,300 or less and 65 per cent received less than the median gross income of about \$8,000 (net of about \$5,000) for the entire profession.

These income data vary considerably with the size of the community and the type of practice. Communities with a population of five thousand or less represent about 48 per cent of the population and contain 30 per cent of the physicians. The latter receive only 18 per cent of the total estimated income of the profession. Many persons in the smaller communities and suburbs, especially those able to pay for higher medical fees, go to the cities for medical services. This has an important bearing on the distribution of physicians. The studies support common knowledge that the specialists secure a much larger part of the total income of the profession proportionately than the general practitioners. It is estimated that they obtain 40 per cent of physicians' fees, although they represent only 23 per cent of the total number of doctors. General practitioners, representing

* Editor's Note.—The above is an excerpt from a letter sent to all members of The Medical Society of the State of California by order of its board of trustees, prepared by Hartley F. Peart, general counsel. Deeming the matter of particular importance to all members of the California Medical Association, the above excerpt is here reprinted.

† For editorial references to excerpts from the Report, as here printed, see that department in this issue, page 112.

56 per cent of physicians, receive 38 per cent of the income of the profession. The "partial specialist" occupies intermediate ground.

Specialization has developed rapidly partly because the public is willing to pay higher fees for such services. The oversupply of physicians and the general acceptance of more or less standardized fees for the general practitioner, which he is not able to increase materially, tend to force physicians in competitive practice into those fields which promise the largest return for their efforts and in which there are the fewest competitors. The medical needs of the community should ultimately determine the relative numbers of different types of practitioners, rather than the unreliable selection and employment of physicians and others by laymen who have no basis on which to judge the value or indications for different kinds of study and treatment, but who form their opinions often in the belief that the most expensive service should be the best.

THE ECONOMICS OF MEDICAL CARE

Owing to the widespread publicity and propaganda regarding the economic aspects of medical care, the impression has been created that the cost for the country is unreasonably high. . . .

The economic problem of sickness may be stated briefly. Sickness is widespread in most communities and frequently arises from the contacts of everyday life. The risks are so uncertain that an individual can measure the probabilities only in a very general way. It is well known from numerous studies that a large proportion of illness does not receive proper attention and much receives none at all. This is particularly true of those who have a low income in communities which do not have public clinics and hospital services. It is also well known that sickness and consequent disability are important factors in poverty and dependency.

The total direct expenditures for medical services of all kinds are probably not greatly in excess of two and one-half billion dollars per year, representing a little over three per cent of the national income in normal times and about \$100 per family per year. As one would expect, these estimates for the entire population are somewhat above those reported in studies of special groups of workers a few years ago which indicated that the average annual amounts spent by families for medical care were about \$60 for wage-earners, about \$62 for farmers, and about \$80 for office employees. A recent study shows that for families with incomes under \$1,200, the average expenditures were \$66 in 1928. For those with incomes under \$2,000, they were \$71.48, and for those with incomes between \$2,000 and \$3,000, they were \$102.76. These expenditures are from four to five per cent of the average incomes in each group.

About seven hundred million dollars of the total is spent for medicines of which nearly 75 per cent is for self-medication, largely through patent medicines, and home remedies supplied by the 60,000 drug stores of the country. The total for cult practitioners—osteopaths, chiropractors, naturopaths, Christian Science healers, and other groups—is probably about one hundred and fifty million dollars. Medical, hospital, and public health activities supported by taxation cost about four hundred million dollars a year.

While these expenditures are large, they are of particular significance only when compared with other items of national expenditure in considering the ability of the people to pay for adequate medical care. Those for education as well as those for legal agencies are approximately as large as those for health. At the height of the recent prosperity our annual expenditures for passenger automobiles, noncommercial use of gasoline, tobacco, candy, cosmetics, soft drinks, toys, jewelry, and amusements totaled over twelve billion dollars, more than five times the direct expenditures for medical care. They were made largely by persons of moderate means for whom the cost of medical, dental, nursing, and hospital services are most pressing. The amount spent each year for to-

bacco alone is about twice the total gross income of all physicians. The amount spent on candy is more than twice that expended on civil hospitals, and that spent for cosmetics is about twice the expenditures for nursing. These items are cited only to indicate that the public can probably afford to pay for medical services.

The public buys what it is taught to buy, and manufacturers spend between one and two billion dollars a year in that instruction by means of advertising. When the public is convinced of the value of proper medical care, there should be no difficulty in financing an adequate program of medical services, although it may mean curtailing to some extent the expenditures for nonessentials.

CONCLUSIONS

Inasmuch as health is the greatest asset of the nation as well as of the individual, those qualified by training and experience have the responsibility of formulating sound programs of medical care and of guiding public opinion aiming to improve and conserve that asset.

Information now exists which gives a reasonably clear definition of medical needs in various communities and the extent to which present efforts meet them. Experience has shown what facilities and personnel are required. A variety of programs have been developed to serve local conditions. The costs are known.

The next steps are the proper coördination of present isolated efforts, the elimination of unnecessary competition and duplication, the development of schemes for distributing the economic burden of sickness, and the education of each community to support an adequate and sound program of medical and public health services.

There is urgent need in many communities for sound regional planning by competent medical and community leaders to secure, distribute, and coördinate local facilities and trained personnel through hospital centers, home nursing and medical services, public health activities, and other features now recognized as essential. Hospital centers provide the professional and community interests and a type of organization well suited to the development of community health programs in many places.

The widespread publicity and propaganda regarding the economic aspects of medical care have focused attention upon the present forms and costs, rather than upon a plan which will insure services of high quality. They have created the impression that the present cost of the care of the sick is unreasonably high. The total expenditures are a small fraction of the national income and insignificant when compared with the vital values which the services aim to protect.

If a high quality of medical care is to be made more universally available, the total expenditures from private and public sources will have to be increased, even after making due allowance for the elimination of wastes and ill-advised expenditures which exist at present. Health services have not secured their full share of the increased "optional consumption" of the country as a whole in competition with commercial appeals for the consumer's income.

Many persons, particularly in the lower income groups, do not receive as much medical attention as they need and cannot be expected to pay for proper care. It is impossible to expect that the highest professional services can be provided in every community or for everyone in any community, but each area should have basic provisions which will meet most of the needs. Proper planning will provide specialized services in near-by centers for those persons who require them.

The plan for a community should be formulated on the basis of medical needs, not on the ability of individuals to pay. The present distribution of medical facilities and personnel is determined largely by economic factors.

The essential feature of a well-conceived program is the quality of the service rendered. The organiza-

tion and the methods of financial support should be formulated to improve and maintain that quality, not merely to provide a service at low cost.

A competent and effective scheme is dependent upon a body of trained personnel who are abreast of current knowledge and skillful in its application. Any plan of organization, whether developed from within the profession or imposed upon it from without, which lessens the responsibility of the trained physician or denies him the rewards of superior ability and character will, in the long run, be detrimental to the public welfare. No scheme of organization or group responsibility can substitute for the priceless, discriminating, and sympathetic judgment of the competent and conscientious physician.

Inasmuch as the objectives of medical care can be attained only by trained personnel, the educational features become paramount, not only in the recruitment and training of students for the professional groups but also in the continuation education which will keep the members of these groups abreast of new knowledge and methods.

The present oversupply of physicians in this country is likely to lead to unnecessary services, to a lowering of the quality of medical care, and to excessive costs because people are not able to judge their needs in such a highly technical field as medicine.

Allowing for the defects in present methods, there are fundamental advantages in the American form of practice which need to be strengthened. It is not necessary to substitute for the present efforts a paternalistic plan ill adapted to the philosophy of American life, but rather to encourage the evolution of a pattern which will embrace the desirable features of our present methods and the correction of their defects.

Some efforts are being made to provide standardized services on a mass production basis, reflecting recent practices in industry. It is a fundamental fallacy to base any program upon the assumption that the human being, who is the unit of practice, can be, or is likely in the future to become, a uniform, standardized organism.

Sound medical care requires that the physician understand the importance and influences of social, economic, and psychological factors as they contribute to the causation, treatment, and prevention of disease in the individual.

The increase of knowledge and technical procedures has made a division of labor within the profession inevitable and desirable. The tendency to partition practice into organs, systems, and techniques, however, with consequent dispersion of responsibility for the patient as a whole, not infrequently turns out to be unnecessary, costly, and misleading.

Specialism has developed beyond the actual needs in the larger communities because it is easier, more satisfying, more highly regarded by the public, and more lucrative than general practice. There is great need of a wider appreciation on the part of the public as well as the profession of the important function of nonspecialized practice and of the fact that only the physician, not the patient, can determine when and what specialist is required.

Specialization and the utilization of a wide variety of nonmedical personnel, institutions, hospitals, and community agencies require collective and group responsibility for the care and treatment of certain patients.

Industrial medicine, group practice, the collective purchase of medical services through various forms of insurance, and the activities of public health departments, hospitals, clinics, schools, workmen's compensation laws, and local, state, and national governments are among the most prominent efforts to provide treatment and care for a large part of the population and to adapt those services to changing professional and social conditions. Some of these activities are in fields regarded in the past as the domain of private practice.

Economic factors such as the capital requirements and maintenance of hospitals, laboratories, and pub-

lic health projects have brought community financial interests into the practice of medicine. Although specialized institutions, equipment, and technical personnel are needed for certain patients, the public has been led to demand and many practitioners recommend some services which are unnecessary and often costly. . . .

Inasmuch as medical education is primarily concerned with the qualifications and preparation of students to practice medicine, it is highly important that the training be permeated with an understanding of the larger social and economic problems and trends with which medicine must deal, and which are likely to influence the form and opportunities of practice in the future. The type of student who studies medicine is determined to a considerable degree by the professional opportunities and social recognition of the physician.

Although physicians represent only about ten per cent of the personnel engaged in the health program of the country, most features of this essential enterprise should be under responsible medical supervision and guidance. Physicians need to be competent to organize and guide the work of subsidiary professional and nonprofessional aides, if they are to make their maximum contribution toward a satisfactory program of medical services for the country.

The preparation of students for the newer obligations and opportunities of the profession requires a sound training in the principles of the basic sciences, which are likely to remain the foundation of medical practice, research, preventive medicine, and public health work. The training should emphasize, however, that the forms and methods by which these principles are to be applied in meeting the needs of individuals and the community are likely to be modified in the future.

TWENTY-FIVE YEARS AGO*

EXCERPTS FROM OUR STATE MEDICAL JOURNAL

Vol. VI, No. 2, February, 1908

From some editorial notes:

Internal Medicine.—Confronted with the fact that there are a good many very excellent papers written on subjects related to internal medicine, but which, either because they are too long or because they are too technical, or for some other reason are not well suited for publication in a general medical journal, such as the *Journal of the American Medical Association*, that association has established a new periodical entitled *Archives of Internal Medicine*. . . .

The Plague Situation.—On December 28, a meeting of the council of the state society was called for the purpose of considering the presence of plague in California and whether or not the state society could do anything to aid in the fight against it. . . .

Up to the end of January there has been no case of human plague in San Francisco for about a month, though the percentage of infected rats has risen steadily until it is over one and one-half per cent. This seems small until one remembers that even in severe epidemics the percentage of infected rats does not exceed six or seven per cent of those examined, and has been as low as two per cent. The Public Health and Marine Hospital Service laboratory is being enlarged and will soon be in a position to examine all rats obtained. Fleas are very scarce in the city, owing to the cold and rainy weather, and that accounts for the falling off of cases of human plague.

* This column strives to mirror the work and aims of colleagues who bore the brunt of society work some twenty-five years ago. It is hoped that such presentation will be of interest to both old and recent members.

With the return of warm weather—and fleas—we may expect to see an increase in the number of human cases. . . .

Indiana Journal.—The latest recruit in the ranks of medical journals published by and for the medical profession, is the *Journal of the Indiana State Medical Association*, the first number being that for January, 1908. To say that it is a fine tribute to the association which it represents is merely to give no more than due credit to the able editor, Dr. Albert E. Bulson, Jr.,† Fort Wayne, who for many years edited the *Fort Wayne Medical Journal* with credit to himself and his publication. . . .

Why Not?—Why not make an effort to secure the membership in your county society of every reputable practitioner in the county before the end of the present year? The annual reports are now coming in to the secretary of the state society, and they show great contrasts. . . .

From an article on "Medical Expert Testimony": Presidential Address, Santa Clara County Medical Society, December 18, 1907, by Antrim Edgar Osborne, M. D.

At the time that this society devoted a session to the consideration of the question of medical expert testimony, I made certain suggestions for a radical cure of the evils that now exist and have so prostituted the giving of testimony in medical-legal matters that the so-called expert witness is little less than an object of derision and his testimony the torn and ragged plaything of litigants and contestants. . . .

To bring about the changes desired, certain legislative power seems to be necessary. Let me present the following concrete proposition: Let a bill be presented to the next session of our State Legislature, to read somewhat as follows:

"An Act providing for the appointment of expert examiners, defining their duties and providing for their compensation. . . ."

From an article on "Rheumatism in Children" by Millicent Cosgrave, M. D., San Francisco.

During the past three years in the children's clinic, it has been my good fortune to observe a number of cases of rheumatism in children, and to note the various aspects under which this disease presents itself. So much so that at the present time the simplest case receives attention, while all cases of tonsillitis, growing pains, and chorea are viewed with suspicion, their history taken in detail and a physical examination made.

From an article on "A Few Notes on Clinics for Diseases of the Skin" by Douglass W. Montgomery, M. D.

The following cursory notes, written for my own pleasure while on a short trip, have no pretension to being at all exhaustive. They may, however, interest my friends for a few minutes, and if so they will serve their purpose.

From an article on "Subjective Symptoms and Painful Sensations in Heart Disease" by E. Schmoll, M. D., San Francisco.

The subjective symptoms and painful sensations in heart disease, and the reflex symptoms due to disturbed function of the heart, have attracted very little attention except in angina pectoris. In this disease, pain has monopolized the attention of observers to the exclusion of other symptoms.

† Editor's Note.—The December, 1932, number of the official publication of the Indiana State Medical Association was a memorial number to Doctor Bulson, whose death occurred just before his completion of a quarter century of service as editor of the *Journal of the Indiana Medical Association*.

CALIFORNIA STATE DEPARTMENT OF PUBLIC HEALTH

By GILES S. PORTER, M. D.
Director

California Public Health in 1932.—General health conditions in California have been good during the year 1932. Outbreaks of communicable diseases which require intensive action in their control have occurred, however. One of the most important of these is an outbreak of psittacosis, or parrot fever. The appearance of this disease in the fall of 1931 and its continued appearance during the early part of 1932 caused considerable apprehension among health officers throughout the United States and led to the issuance of a quarantine order by the Surgeon-General of the United States Public Health Service which prohibited the interstate shipment of birds of the parrot family unless accompanied by a certificate issued by the state health officer in which it must be declared that the birds under shipment were free from infection. More than fifty cases, with ten deaths, have occurred in California during the year, and more than fifty cases, with at least six deaths, have occurred in different states through contact with parakeets shipped from California. The investigation, which was undertaken at the beginning of the outbreak, led to the discovery that Southern California is the center of the parakeet industry in the United States, and that large numbers of birds are bred and shipped from Southern California.

As a measure of control, the inspection and licensing of aviaries was begun early in 1932. More than a thousand licenses have been issued during the year and a considerable number of sick birds have been destroyed. The California Board of Public Health has enjoyed the coöperation of Dr. K. F. Meyer and the Hooper Foundation for Medical Research in making studies of psittacosis in California. Work in the control of this disease must be continued during the coming year if it is to be brought under definite control.

Influenza.—The year 1932 was an influenza year. As early as May, minor outbreaks of influenza in camps and institutions were reported. The early report of cases of this disease always constitutes the forerunner of a widespread epidemic. This was particularly true in 1932, for since October thousands of cases of this disease have been reported. Fortunately they are mild in type and relatively few deaths from influenza or pneumonia have occurred. This epidemic is more widespread than any that have occurred since 1918, and most cases are reported from rural districts.

Trichinosis.—During the early part of 1932, several outbreaks of trichinosis were reported. The most important of these occurred in Marin and Del Norte counties. In these two outbreaks more than fifty cases were recorded. Most cases were in individuals who had eaten raw sausage meat from infested pork meat. The Marin County outbreak was traced to hogs which had been fed garbage from a municipal garbage dump. Steps were taken to prevent the infestation of hogs from sources of this sort.

Food Poisoning.—Large numbers of cases of food poisoning were reported during the year 1932. Some of these were traced to shellfish, and others to the use of infected cream custard products. Others were traced to the use of meats insufficiently cooked and held under improper refrigeration. Too many cases of food poisoning occur unnecessarily. The proper cooking and proper refrigeration of most food products that are subjected to such processes would go far toward the prevention of outbreaks of this sort.

Typhoid Fever.—The year 1932 has been an exceptionally good year in the control of typhoid fever. In spite of the fact that heavy snows occurred in the mountainous regions of this state during the winter of 1931-1932, relatively few cases of typhoid have occurred. Ordinarily, the heavy snows cause the streams to reach high stages and the watersheds are scoured out, causing the contamination of supplies which come

from surface streams. Fortunately, however, typhoid fever has remained at low level throughout 1932.

Venereal Diseases.—Increased numbers of cases of the venereal diseases have been reported during 1932, but it would seem that these increases are apparent rather than real. They are due unquestionably to the fact that attendance at public clinics has increased because of financial distress and the statistical increase in cases of venereal disease may be traced to the increased attendance at such clinics. Most cases of venereal disease, in normal times, are reports from clinics.

Mussel Poisoning.—Cases of mussel poisoning occurred at midsummer in 1932, and the shellfish in laboratory examinations showed increased toxicity as early as May. The confirmation of the discovery that cases of mussel poisoning may be prevented through the use of bicarbonate of soda in the cooking process was announced by the Hooper Foundation for Medical Research. This simple procedure is unquestionably of tremendous value in the prevention of mussel poisoning, and it is believed that if consumers of these shellfish will consistently follow this procedure the annual crop of sickness and death from mussel poisoning may be eliminated completely.

Rabies.—Several outbreaks of rabies have occurred in California during the year 1932. Some of these have required investigational work upon the part of the State Department of Public Health. Fortunately it was not necessary to establish a state quarantine upon any of the districts wherein the disease occurred. The application and enforcement of local control measures were effective everywhere.

Relapsing Fever.—A survey of rodents in the high Sierra was made during the summer of 1932 in an effort to determine the factors which may give rise to cases of relapsing fever which occur at high altitudes of the state. Thirty-eight cases of this disease have been recorded in California. It is highly probable that many other cases have occurred but have not been reported, and probably many cases have not been diagnosed as those of relapsing fever. It is generally supposed that ticks transmit the infection and that rodents are important agents in perpetuating the infection in the ticks. The findings and report of the survey are not completed as yet. It may be stated, however, that the spirachete has been demonstrated in chipmunks.

Conclusion.—It would seem that the year 1932 is the last of the cycle in which good public health conditions are characteristic. The ill effects of the economic depression, which began in 1929, will, without doubt, cast their reflection in the public health records for 1933. Already, health officers are aware of the beginnings of ill health which have come as a result of underfeeding, exposure, and mental strain due to hard times. At this writing, statistical data relative to the prevalence of tuberculosis during 1932 are not available. It is safe to assume, however, that this disease will show increases during 1933 and that health officers will be obliged to extend their efforts in the control of this, as well as other communicable diseases.

Safety Lies in Certified Milk.—The Medical Milk Commissions of Alameda and San Francisco counties have issued a circular letter to physicians, dentists, dietitians, public health nurses and others who are interested in the provision of a safe raw milk. The letter is issued under the signatures of Dr. Ina M. Richter, secretary of the San Francisco County Medical Milk Commission, and Dr. Alvin Powell, secretary of the Alameda County Medical Milk Commission. Attention is drawn to the reduced prices of this product and also to the various safeguards to which certified milk is subjected before it reaches the consumer. The following outline of these safeguards is presented:

1. Certified milk is produced and distributed under the personal supervision of a commission of physicians appointed by the medical association of each county.

2. Medical supervision of employees:

(a) Each employee is given a complete physical examination every six months to insure that he is in good health.

(b) Frequent laboratory examinations are made, to detect carriers of milk-borne disease.

(c) Each employee is immunized against typhoid fever once every two years and vaccinated against smallpox.

3. Veterinary and sanitary supervision:

(a) Each animal is given a physical inspection twice each month.

(b) Each animal must pass frequent tests for tuberculosis and Bangs' abortion disease.

(c) The milk is regularly tested to insure a product of uniform chemical composition and free from disease-producing organisms.

(d) The dairy is of approved construction and maintained in a sanitary condition. All equipment is sterilized under steam pressure.

4. Handling of milk until reaching consumer:

(a) The outside cap is dated and protects the pouring lip of the bottle.

(b) The milk is kept on ice until it is delivered to the consumer.

BOARD OF MEDICAL EXAMINERS OF THE STATE OF CALIFORNIA *

By CHARLES B. PINKHAM, M. D.
Secretary-Treasurer

Official Notices

*Meetings of the Board of Medical Examiners
of California for 1933*

Written examinations, legal hearings and all other business.

February 27 to March 2—Independent Foresters Hall, 1329 South Hope Street, Los Angeles.

July 10 to 13—Native Sons' Hall, 414-430 Mason Street, San Francisco.

October 16 to 19—State Capitol, Sacramento.

Special meeting for written examination only, Belmont High School, 1575 West Second Street, Los Angeles, July 24 to 27.

All reciprocity applicants must appear; if recommended for "direct," appear before one California board member with photograph on which such member will indorse date of appearance and sign his name, or appear (with photograph) before the secretary of the medical examining board of the state wherein applicant resides and said secretary will sign, seal, and date applicant's photograph.

Oral examinations for 1933 (required when reciprocity application is based on a state certificate or license issued ten or more years before filing application in California) will be held January 18, San Francisco only; April 19, Los Angeles only; June 14, San Francisco only; July 24, Los Angeles only (Belmont High School, 1575 West Second Street); October 16, Sacramento only; December 6, Los Angeles only. Unless otherwise notified, oral examinations will be held in the Board office, California State Building, Los Angeles, and at the Board office, 450 McAllister Street, San Francisco, on the above dates.

No examination will be given unless completed application and fee has been filed in the Sacramento office at least two weeks prior to the date when applicant expects to appear.

No examination will be given unless applicant notifies the Sacramento office at least two weeks in advance, stating when he will appear.

Oral examination may be required of applicants under Section 11a (national board credentials) or Section 12 (United States commissioned medical officer).

* The office addresses of the California State Board of Medical Examiners are printed in the roster on advertising page 6.

Highlights

1932 Annual Report—Board of Medical Examiners

Twenty-eight California victims have been buncoed out of \$29,956 by the eyesight swindlers. "Too long has this class of harpies mulcted large sums of money from the aged citizens of our state, paid on promises by these swindlers that failing eyesight would be restored by their 'hocus pocus' methods. . . . Surprising as it may seem in this enlightened age, there appears to be no scarcity of gullible individuals who believe that cataracts can be removed by means of fake radium water dropped into the eye, and that dimness of vision will be cured by wearing a sixty-cent alleged radium belt (sold them for several hundred dollars)."

Robert Cavenagh, confessed member of a trio of eyesight swindlers that assertedly buncoed Johanna Zeh of Antelope, Sacramento County, out of \$9,986.50, is now serving a sentence in the Sacramento County jail.

"For their coöperation in discouraging the activities of the eyesight swindlers, both Superior Judge Martin I. Welsh and District Attorney McAllister of Sacramento County with Superior Judge A. C. Finney and District Attorney Elmer W. Held of Imperial County have earned a place on the honor roll as deserving universal public acclaim for the salutary lesson in the form of a jail sentence imposed on this class of heartless racketeers who for so many years have fattened on ill-gotten fees mulct from our aged and infirm citizens. Pathetic are the letters written by the victims of these eyesight swindlers, particularly those who having given their life savings to these gross hokum frauds are now dependent on charity for the few remaining years of life's span."

Elliott Wilkinson, reported as perpetrating eyesight swindling hokum operations in California, is now said to be incarcerated in the Minnesota state penitentiary following his conviction on buncoing Margaret Grossman out of \$1,500 for fake radium drops in the eyes and an electric belt sold to cure her ailment.

The escapades of a San Joaquin County General Hospital intern using the name of Alfred Hesse and the credentials of a bona fide medical practitioner of Otisville, New York, are related as evidence that superintendents of hospitals are frequently careless in their investigations of the credentials of alleged doctors who they employ to treat the sick and afflicted.

Comment is made on the public welfare activities of the Board of Medical Examiners in its endeavor to furnish a high quality of professional service to the sick and afflicted of this state. Mention is made of the "Persistent warfare against those 'sharpers' that seek to defraud our health-seeking citizens by inconceivable schemes and methods."

Mention is made of a medical diploma issued in the name of a visionary medical college assertedly located in San Francisco, of which there has never been found any record.

Three appointments have been made to the Board of Medical Examiners.

A memoriam to Burt S. Stevens, M. D., deceased member of the board, expresses our sorrow over his loss.

Three hundred applicants from various medical colleges throughout the world took the written examinations during the year. Included in this list were applicants from medical colleges in Austria, Canada, Germany, Hungary, Ireland, Italy, Portugal, and Russia. Ninety-three (plus) per cent of the written applicants passed, and six per cent failed. The larger number of failures were from foreign medical colleges.

The 1932 records show less applications filed and less certificates issued than during the prior year.

Three revoked certificates were restored during the year.

The larger number of reciprocity applicants, as in the prior year, came from the State of Illinois. One hundred and thirty-seven graduates of medical schools were licensed to practice in California based on credentials issued by other states, whereas only thirty-one California licentiates sought registration in other states.

Thirty-seven California licentiates were called before the board to answer charges of unprofessional conduct, the larger number of complaints being based on narcotic derelictions.

Eleven licenses were revoked and thirteen were placed on probation, while seven were dismissed. Penalty was deferred in three instances, and four hearings were continued to the next year.

The report of the Legal Department of the North commented on the breaking up of the so-called "murder farm" near Chowchilla, Madera County, the statement being made that enforcement of the Medical Practice Act "will discourage and deter the caravan of freaks, frauds, fakers, and faddists who journey to California to find victims of their crafts and artifices, and, finally, it will certainly protect against themselves that class which has been designated for nineteen centuries as the sick and afflicted, whose bodies racked by pain and sickness, whose minds distraught from suffering, readily yield person and purse, life and property, to the allurements of the charlatan and quack."

The report of the Southern Legal Department shows its usual activities, comment being made that "The supply of fakers, however, like the supply of patients, is endless. New crops appear as fast as the old one is harvested, and notwithstanding the continual fight to protect the sick and afflicted, hundreds are annually bilked out of their last dollar by these conscienceless charlatans. Probably the greatest sufferers from the medical fakers are the unfortunate individuals afflicted with cancer."

Death laid its heavy hand on licentiates during the year 1932, the records showing 270 as having passed to the Great Beyond.

Twenty licentiates changed their names either by marriage or court order.

At the close of 1932 forty-seven applications were pending, representing a total of \$3,455 in application fees.

The report of receipts and expenditures is self-explanatory.

News Items

On January 18, Governor Rolph announced the appointment of Percy T. Magan, M. D., as a member of the Board of Medical Examiners for the term ending January 15, 1937 (vice Burt S. Stevens, M. D., deceased). George H. Kress, M. D., was appointed a member of the State Board of Health for the term ending January 15, 1937 (vice George Ebright, M. D.).

"An automobile mechanic who posed as a physician, served as an intern in a California hospital and treated patients, was held by Los Angeles authorities today on a charge of passing worthless checks in Oakland, local police were advised. The arrested man is George Stanley Paris, alias 'Dr. Robert B. Wilson.' . . . 'Dr. Wilson's' operations throughout the county became so notorious, according to police and Dr. Charles B. Pinkham, secretary-treasurer of the Board of Medical Examiners, that last September warnings were sent to hospitals and physicians. . . . He served as an intern at the Glendale Hospital. . . . He first came to the attention of the authorities in 1931, police said, when he attempted to secure a position as ship's surgeon and posed as a graduate of the University of Illinois with the class of 1927. . . . On January 12 of this year . . . he approached A. Schmalley, an officer of the First National Bank here, and asked him to forward the \$3,000 check to the Guardian Trust Company of Detroit to be cashed. The check, signed with the name George Paris, was forwarded by air mail, Schmalley said, but in the meantime Paris tried to secure a 'loan' against it. The Detroit bank advised the local bank on January 14 that it could not honor the check and police were notified in turn. . . . Police said he also was wanted in Los Angeles and might not be returned here for trial" (Oakland *Tribune*, January 17, 1933). The 1931 annual report of the Board of Medical Examiners published a photograph, fingerprint classification, etc., of "George Stanley Paris," San Diego No. 8794, who in February, 1931, was serving as an intern at the Windsor Hospital, Glendale, although no record could be found that he had any medical credentials.

"Dr. George M. Gardner, San Francisco physician, was found guilty by a jury before Federal Judge A. F. St. Sure yesterday of making a fraudulent affidavit in a veteran's compensation case. He will be sentenced Saturday. Doctor Gardner swore he had treated Arthur Giffen, a veteran, for tuberculosis in 1923. The government claimed the doctor did not meet Giffen until 1930" (San Francisco *Examiner*, January 18, 1933).

"Mary Balkwell, seventy-one, who many years ago served a term in San Quentin for the death of a woman resulting from an illegal operation, yesterday was placed on ten years' probation upon the plea of the District Attorney's office. In December, 1931, Mrs. Balkwell was acquitted by a jury of the murder of Mrs. Mildred Hendry, illegal operation victim. Yesterday Mrs. Balkwell entered a plea of guilty of manslaughter in connection with the same. . . . While declaring that Mrs. Balkwell had been a 'menace to the community,' Judge Conlan granted the request, but told the woman that any complaint against her would result in drastic action" (San Francisco *Chronicle*, January 13, 1933).

"We recommend to the attention of readers who believe that this enlightened era has gone past its belief in medicinal cure-alls and hocus-pocus panaceas, the report of two New York investigators of the patent medicine racket, Arthur Kallet and F. J. Schlink, who are contributors to the current *Nation*. Their researches have uncovered some startling facts. Every year, they find, the American public spends \$350,000,000 on patent medicines and nostrums in the

vain hope of curing illnesses, ranging from slight indigestion to malignant cancer. . . . The patent medicine racket is one of the most insidious infesting American society. The law regarding it, especially that phase which takes no note of flagrant advertising misrepresentations, needs a thorough revision. . . ." (San Francisco *Argonaut*, January 6, 1933).

"The conviction of Major Charles A. Shepard, Army medical officer, for the poison murder of his second wife at Fort Riley, Kansas, in June, 1929, was affirmed in a majority decision of the United States Circuit Court of Appeals made public here today. Shepard is under sentence of life imprisonment. He was convicted by a jury at his trial in Federal Court in Kansas City, Kansas, December 22, 1930. He has been at liberty on bond pending the appeal. . . ." (Associated Press dispatch, dated Topeka, Kansas, January 6, 1933, printed in the San Francisco *Examiner*, January 7, 1933).

"Karl J. Weberg, former Pasadena city fireman, was held in jail here today while investigators scanned a list of names of more than seven hundred women upon whom Weberg was accused of performing illegal operations. Weberg was booked on suspicion of murder, following the death of Miss Florence Phelan, twenty. The Los Angeles County coroner's office ascribed death as resulting from an illegal operation. . . . Investigators said the reputed pseudo-physician had a daybook containing the names of more than seven hundred women. They said it revealed he had treated an average of more than two a day in the last year. . . ." (Los Angeles *Record*, January 5, 1933). The records of the Secretary of State show that on January 20, 1922, K. J. Weberg incorporated the Pasadena College of Chiropractic.

A recent report that a San Diego resident had sent a postoffice money order for \$30 and his chiropractic diploma to a neighboring state, receiving in return a naturopathic certificate granting him the degree Doctor of Naturopathy and the asserted right to practice in said neighboring state is an indication that naturopathic legislation in California must be watched very closely.

Elmer Young, Imperial County farmer, recently reported his experience with an eyesight swindler giving the name "Dr. J. C. Snyder," who assertedly swindled Young by the old hokum eye-drop bunkum described in the article on eyesight swindlers in the 1930 annual report of the Board of Medical Examiners published in our 1931 directory. Mr. Young identified the photograph of Matthew O. Wilkinson as that of the individual calling himself "Dr. J. C. Snyder," who claimed to have an office at 407 Russ Building, San Francisco.

According to reports, Horace Ippelthwaite, also known as Daniel Davenport, M. D., referred to in the *Journal of the American Medical Association* of October 17, 1931, pages 1167 and 1168, is lecturing in the Los Angeles high schools. Said article related that investigation fails to verify any medical credentials claimed by this individual, the article closing with the following sentence: "It is to be hoped that the local medical profession will expose the pretensions of this impostor."

Reports relate that Thomas G. Aved, charged with violation of Section 15 of the Chiropractic Act, in the Los Angeles Municipal Court, on December 20, 1932, pleaded guilty and was sentenced to pay a fine of \$100 or serve fifty days in the city jail, sentence suspended on condition that he change his signs immediately.

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THE PRIVATE PRACTITIONER AND THE HEALTH DEPARTMENT*

By CARL R. HOWSON, M. D.
Los Angeles

DISCUSSION by John C. Ruddock, M. D., Los Angeles;
H. M. Bracken, M. D., Claremont; John H. Graves, M. D.,
San Francisco.

IN any consideration of the economics of medical practice the problems resultant upon the growth of preventive medicine and of the social conscience cannot be ignored. These group themselves under three main heads: (1) control of communicable disease; (2) prevention of disease; and (3) care of the sick who are indigent or near indigent. The problem of the care of those who are able to pay low fees, or even in some cases full fees, obtrudes itself to some degree, especially in connection with certain activities of health departments and health centers.

SIGNIFICANCE OF DISEASE PREVENTION EFFORTS

The movement aimed at prevention of all disease is a logical outgrowth of the effort to *prevent* communicable disease, which in turn developed from the attempt to *control* communicable disease. Control is obviously a problem having to do with the public en masse, and is primarily the problem of the public health department. Prevention involves many matters which can be handled only by the public health department, such as inspection of water supplies, of food supplies, of methods of sewage and garbage disposal, of quarantine, etc. It has to do with the public as a whole, and cannot be handled as it affects individuals. However much credit belongs to the medical profession for demonstrating the necessity and efficiency of these measures, there can be no question of conflict with the individual medical practitioner in their enforcement.

PREVENTION OF COMMUNICABLE DISEASES

Science has made available additional means for the prevention of communicable diseases, perhaps the most notable being immunization against smallpox and diphtheria. Smallpox is now, thanks to the general use of vaccine along with improved

sanitation and the quarantine of all cases, largely a disease of the past. Immunization against diphtheria is of much more recent origin, but a great decline in incidence has taken place within the past generation. The demonstration of the contagiousness of tuberculosis gave a tremendous impetus to attempts not only to cure but prevent it, and in 1904 led to the founding of the National Association for the Study and Prevention of Tuberculosis. The aggressive attacks on the disease from numerous angles have been productive of greater results than many of the most optimistic members of that organization even hoped for. The great increase in the degenerative diseases as a cause of death has more recently focused attention upon them, and increasing effort is being expended to prevent the development of these noncommunicable diseases.

FIELDS OF PRIVATE AND PUBLIC PRACTICE

The treatment of disease was formerly the field of the private practitioner exclusively, with the exception of the provision made by the state or community for the care of those financially unable to meet the problems of illness, as a result of which we have today in all large centers the development of great institutions for the indigent sick. In practically every case skilled medical care is being provided by the private practitioner "without money and without price."

As the public health administrator has viewed the vast and constantly expanding horizon of preventive medicine, he has enthusiastically enlarged the facilities of his departments to include a greater and greater field of activity. This has given rise to a situation without precedent, and the time has come when it is necessary to take stock; to ask ourselves whether the expansion is justified from the standpoint of the general public and the medical profession as a whole.

There is a legitimate field of activity for both the health department and the private practitioner, but when we attempt to delimit these fields we at once find ourselves dealing with a situation of great complexity. There has been presented to this convention a carefully thought-out report on this subject which cannot fail to meet with the approval of all thoughtful members.

In the presence of a smallpox epidemic we would be the last to question the propriety of the

* Read before the second general meeting at the sixty-first annual session of the California Medical Association, Pasadena, May 2-5, 1932.

health department doing all in its power to secure immunization of the entire public in the shortest possible time, irrespective of economic status. At other times the private physician should see to it that his clientele are adequately protected. The more conscientiously this is done the less the danger of an epidemic, and the less work there will be for the health department should an epidemic occur.

Large epidemics of diphtheria rarely occur now, and those of us whose practice does not include a large proportion of children come into contact with the disease so seldom that we are prone to minimize its importance. Its still high mortality rate and the fact that it is always with us should prompt a greater utilization of our opportunity to immunize the children of our patients. The occurrence of small outbreaks in the schools means necessarily the immediate immunization of fairly large groups of children. This is usually done by the health department as an emergency measure, again irrespective of economic status. Its necessity is in inverse proportion to the thoroughness with which the private practitioner has attended to it in advance.

HEALTH CENTERS

For the purpose of centralizing and increasing the efficiency of the health department activities, we have seen during the past decade the development of health centers. A health center has been defined as "an organization which provides, promotes and coördinates medical service and related social service for a specified district."¹ This is an all-inclusive definition, but for the purposes of this paper the statement concerning the aims of the organization of the Alameda County Health Center is more to the point: "to increase the efficiency of public health, relief, and welfare work in Alameda; to eliminate, by consolidation and coöperation, duplications of effort; to maintain clinics and furnish medical treatment and advice for persons unable to pay; to disseminate knowledge of, and to educate the public in, preventive medicine; to coöperate with the Health Department of Alameda, the Public Health Center of Alameda County, and other institutions and agencies of like character."

In the counties of Alameda, San Joaquin, and Los Angeles the centers have reached a high degree of development; there are nine in Los Angeles County and some twenty smaller centers in rented quarters; this county's centers have been maintained with medical staffs in part salaried and in part volunteer; they have served in regard to communicable disease control and the various welfare and educational activities, and have also rendered diagnostic and therapeutic services to the indigent and semi-indigent. Noteworthy development has taken place in several other states, particularly New York, Massachusetts, Connecticut, Ohio, and Iowa.

Time will not permit of a detailed study of the various health center plans and their functioning, and the advantages and disadvantages of the

different types. Many committees have devoted much time and thought to this problem, and in the present fluid state of society and of the problems connected with illness, dogmatism is dangerous.

PART OF MEDICAL PROFESSION IN PUBLIC HEALTH PROGRAMS

But it is evident that the private practitioner should play a much more important part in all public health programs than in the past. As private practitioners we have recognized the great advance in public health and preventive medicine, but have tended to leave that type of work largely or entirely to specialists, with the result that frequently the specialists have developed it without our active assistance. This has not been to the best interests of either. The health administrators have felt that the general profession did not appreciate their efforts; and, as the need and opportunity for their work have increased wherever preventive medicine has opened new vistas, there has been a tendency to impatience with the conservatism and lack of interest manifested by the private practitioner. Lacking the stabilizing influence of his coöperation, some ambitious health projects, highly laudable in themselves, have been launched, when a more careful consideration of all the social elements involved and closer coördination with the medical profession as a whole would have suggested much less radical and expensive programs. These would, in the long run, have been at least as productive of results, and much friction and turmoil would have been avoided, to say nothing of the burden placed upon the taxpayer by the construction and equipping of buildings far in advance of the needs of the community. The general profession has felt that in some cases the health department activities have tended to encroach steadily upon the field of private practice and to lead strongly in the direction of state medicine.

TAXPAYERS SHOULD ALSO BE CONSIDERED

The present depression has brought home to us the fact that the almost unlimited expenditures of the past few years on our charitable and semicharitable institutions were based on a false premise. "The best is none too good" for our unfortunate improvident citizens may be beautiful sentiment, but "as good as is reasonable under the circumstances" would appear to be more practical. It seems probable that the tax-paying public and those having control of the taxpayers' money will be governed more by this latter idea in the near future. Health centers represent a very considerable capital outlay and a heavy maintenance cost. They should be built only after a careful study of the needs of the people to be served and the approval of the medical society.

HEALTH CENTER ACTIVITIES

Health-center activities may be divided into two classes: those belonging strictly to the public health department, and those having to do with the indigent sick of the community. Under the former head would be classed inspection services connected with food supplies, water, sanitation, quarantine, vital statistics, health education, etc.; under

¹ Davis, Michael M.: *Clinics, Hospitals, and Health Centers*, Harper's, 1927.

the latter the general medical and surgical clinic with subdivisions for the specialties. Prenatal and well-baby clinics probably have a place under the health department, but any individual requiring treatment should be referred to the private physician, or, if indigent, to the other clinic. Diagnostic and therapeutic services are for those who cannot compensate the physician for such work. There is no justification for the use of public funds to supply such services to those able to pay. Tuberculosis and venereal clinics entail special problems, but probably belong in the clinical department.

"In all free health centers there should be a well-conducted social service department, first, to guarantee to the public, to the physicians, and to those who supply the money and the service that only applicants who are unable to pay for private service are admitted; second, after a patient is admitted, to see that the recommendations made by the doctor are followed out as thoroughly and expeditiously as possible, so that the greatest benefit will be secured from his services."² It is obvious that the relationship between the clinic and the medical profession hinges largely on the efficiency of the social service department; for, unless there be adequate studies of all applicants, abuses will inevitably creep in and lead to friction.

The clinical department should be composed of members of the local medical association. They should form a staff organization to manage it. Where a number of health centers or clinics exist under one health or charities department, there should be a central organization of the volunteer staffs of such clinics, and within it a central governing committee. We are strongly of the opinion that there should be active supervision and coöperation on the part of the local medical society; it is imperative where the centers cover any large part of a county, in which case the county medical association should be vitally interested. The volunteer staffs and the local or county medical association should be represented on the supervising body if the clinics are to function to their highest efficiency in coöperation with the department of county charities, the county hospital, the county health department, and the medical profession.

The health-center laboratory and diagnostic facilities could be of increased service to the community if they were made available to the local physicians for such of their patients as require work of this type but are unable to pay anything approximating the regular fees. The same use might be made of some of the expensive physiotherapeutic appliances already installed.

LIMITATIONS IN PUBLIC HEALTH WORK

The extension of public health activities to include all the possible range of effort in the field of preventive medicine is stimulating to contemplate in the abstract, but might well be a nightmare to the taxpayer if considered as an immedi-

ately legitimate undertaking. The periodic health examination of all the citizens of the community would be a most praiseworthy procedure, undoubtedly productive of appreciable improvement in the health of the community; but not even the members of the medical profession are as yet sufficiently impressed with its possibilities to have attempted it as a practicable procedure for themselves, to say nothing of their patients. Its more enthusiastic advocates, both medical and non-medical, are prone to lose sight of the fact that our knowledge of the beginnings of most of the diseases against which public effort is aimed is still far from complete, and that utilization of what little knowledge we possess for the detection of these diseases in their incipency is one of the most difficult technical procedures in medicine, calling for the highest degree of skill and the outlay of a very considerable amount in money for each patient. When done in a routine manner it is apt to mislead and give rise to a sense of security which rests on a very uncertain foundation. The ultimate result would, I fear, be a reaction to the discredit of the medical profession.

That all who are not in good health, rich and poor alike, should have a complete examination and diagnostic study when they present themselves to the doctor or to the clinic, is a praiseworthy ideal. But the cost of such service, undertaken by the community, would be prohibitive, and the service would in no way be commensurate with the expense.

POSSIBILITIES

In all communities, large and small, the private practitioners should be thoroughly familiar with all public health measures and activities. The health department owes a duty to the medical profession second only to that which it owes the general public. It is its opportunity and should be its privilege to educate the general profession in public health measures to the end that every physician's office may be a health center. "Fundamentally the problem is one of preparing the public for the service which may be rendered by the physician and at the same time preparing the physician to give the type of service to which the public is entitled."³ This would entail much work and considerable expense, but the results would amply justify the cost.

The recent experience of Geib and Vaughan in Detroit in connection with diphtheria immunization has demonstrated this beautifully. It is true that the cost was considerably in excess of what it would have been had the health department handled it in the usual manner, but a much higher percentage of the susceptible population was immunized than would have been possible had that been done. It was the conviction of the health department also that the additional expense was amply justified as a public health educational measure. A step in the same direction has recently been made by the Los Angeles County Medical Association with the coöperation of the various health officers in the county.

The measure of the success and efficiency of a health officer should be, not the territory covered

² Report on Health Centers of Alameda County.

³ Geib and Vaughan: *The Physician as Health Worker*, Jour. A. M. A., Vol. xcvi, No. 6, p. 366.

or the number of employees or health centers in his department, but the extent to which he has merited the confidence of and popularized health measures with the general medical profession, because this will in turn be an index of the thoroughness with which health education has reached and permeated the rank and file of the general public. It is not to be doubted that the contacts of the medical profession as a whole far exceed those of the health department. An attitude of mutual coöperation and helpfulness on the part of the health department and the private practitioner will result in increased efficiency and much more general adoption of public health measures, and will enable the practitioner to serve his patients better and to increase the scope of his activities.

Our American system of government is based on the theory that the safest and best plan is to have the people do as much for themselves as possible. This may entail more initial expense than would centralized governmental action, but it is cheaper in the long run.

CHARITY HOSPITALS AND CLINICS

Reference has been made to the services rendered without compensation by the private practitioners in the care of the indigent in community hospitals. It is true that the physician derives valuable experience from the work he does at these institutions. It is equally true that in no other business or profession does the individual donate his services simply for the experience he gains, however valuable that may be. It has been charged that physicians take positions on the staff of these hospitals because of the practice they get indirectly through the patients there. As a faithful and regular worker in our own county hospital for well over a decade, I have yet to see sufficient benefit of this type to pay the automobile expense incidental to service there. I can call to mind several items on the wrong side of the ledger in connection with such patients. My experience in this is the same as that of practically all members of the attending staff of that institution.

Charitable clinics without number abound in our State, particularly in the southland, in many cases filling a definite need, in others serving only as an outlet for the energies and philanthropic dispositions of worthy but not always well advised citizens. Frequently the efforts of deserving institutions are duplicated, in consequence of which they are forced to labor under a heavy handicap. Such duplication inevitably results in inefficiency and excessive costs of administration. Irrespective of the need for the clinic and the amount of money expended on it, free service is expected and often demanded of the physicians of the community. It is seldom, indeed, that they are permitted a voice in determining the policies of the clinic. As your Committee on Hospitals, Clinics, and Dispensaries reported last night, there is need for legal measures which will place all such groups under the control of a central organization, probably the health department, which would set up standards such as have been approved by this association, and see that they were lived up to.

Apart from the general idea held by the public that the doctor makes his money easily and in large amounts, and the tradition among the members of the profession that ours is primarily a humanitarian vocation, there is no reason why the community should expect us to render gratuitously professional services worth in the aggregate, throughout the State, millions of dollars a year. Do the administrative or political powers think any more of us for it?

The organizations served by the Community Chest, which are the reason for its coming into being, exist by virtue of the physicians' gratuitous services. I venture the opinion that these services to charitable institutions are comparable in value to the contributions made by all other groups of citizens combined. In the annual Chest budget, do we receive credit for their value? Is the doctor consulted in regard to policies? Is his opinion asked or considered relative to the standing of the various organizations and their merits? We are perhaps not wholly free of blame for our present situation, but the fact remains that we are going to be "less than the dust" until we assert ourselves.

IN CONCLUSION

We do not know what lies ahead of us. We have had an intimation of the character of the final recommendation of the Committee on the Costs of Medical Care. We hear rumors of radical political action. Whatever eventuates, we must be prepared to see to it that nothing is done, under the guise of benevolent paternalism, which will throttle medical initiative and progress, with resultant deterioration in the quality of service received by the people. We must also see to it that if provision be made by the state for the extension of medical and hospital care for its citizens, cognizance be taken of the services rendered by the physician in hospital, health center, and clinic, at present uncompensated, and that nothing be done to limit the patient's freedom of choice in the selection of his physician.

307 West Eighth Street.

DISCUSSION

JOHN C. RUDDOCK, M. D. (1930 Wilshire Boulevard, Los Angeles).—Doctor Howson's paper comes at a time when the medical profession is awakening to a realization that there are certain encroachments which have come insidiously, and which may, unless curbed or regulated, destroy a relationship between the doctor and his patient, which has always been an individual one.

Doctor Howson's paper has taken up merely one phase of the problem of this metamorphosis that is occurring—that phase dealing with public health. The medical profession itself is responsible for public health and, as has been so well brought out by the speaker, there has been a gradual usurping and overlapping between the scope of practice of the health officer and the private practitioner because of the enlargement of the health departments in those communities which are more thickly populated.

In the beginning, when by means of organized effort it was proved that the incidence and mortality rate of certain diseases could be lowered, the health department was the answer, introduced by the medical profession in order to educate the public, improve the hygiene of the community, quarantine communicable diseases, encourage vaccination and immunization, and

keep certain vital records; and through this means decrease disease in the community and safeguard the public.

There have been from time to time many added detailed duties which various health departments have usurped and which often may have a public health factor in a very broad sense. Some of these are not real public health issues, but social problems and maladjustments.

To strictly draw a line of demarcation between the practice of medicine by a governmental agency, as represented in this instance by the public health departments, and private practice is almost impossible. The indigent, we all agree, are a problem that faces the community as a whole; but if Mr. X, who is not an indigent, has a mitral stenosis it is a problem that belongs strictly to Mr. X, and does not concern the community as a whole. The treatment of disease in those classes that are nonindigent rightfully belongs to and is the business of the patient and his doctor.

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H. M. BRACKEN, M. D. (Retired State Health Officer, Minnesota, 1897-1919, Claremont).—This is a timely paper. One important question is, should a health center care for the indigent sick? I think not. It is a dangerous procedure to combine under the same roof health problems and clinical problems. The diagnostic and therapeutic services for the indigent should be carried out under hospital supervision through the outdoor department or the hospital itself, rather than under the health department. A health center should give its attention to the prevention of disease, not to its treatment.

The health center does not need a social service department. The hospital does; and for a dual purpose. First, to see that only the indigent are cared for at public expense. Second, to see that those who need follow up treatment report for such as directed. This latter applies especially to the treatment of venereal diseases.

There may be districts in which there are no hospitals where the ambulant indigents can be cared for. Under such conditions it may be necessary to have an "outdoor department" for the sick at a health center. It is unusual, however, to find a health center in a district where a hospital is not easily accessible. If an outdoor department is to be operated as a health center it should be as a distinct unit under a group of trained medical men, including the specialists. The county medical society should be thoroughly interested in the make-up of this staff. The health activities at such a center should be carried on by a staff of thoroughly trained health agents.

✽

JOHN H. GRAVES, M. D. (977 Valencia Street, San Francisco).—Doctor Howson's paper indicates a thorough knowledge of the subject and makes it possible for him to deal with the various phases of the problem with entire fairness.

There is a legitimate field of activity for the health officers of federal, state, and local health departments, and the splendid results of their work must be obvious to the most casual observer. It is unfortunate that in certain instances the bureaucratic spirit is evidenced by a tendency to transgress on territory and engage in activities which clearly belong to curative medicine. Speaking for the State Department of Public Health, the controlling board of which is composed of officers and members of this Association, it is almost unnecessary to say that the State Department of Public Health is distinctly against the invasion of the legitimate field of the practicing physician by the health officers under its control.

It is true that the line which divides the fields of public health activity and the physician's practice is, in places, ill-defined and scarcely perceptible. It is, and will be, the policy of the State Board of Health to make this dividing line as clear and distinct as possible.

It is the Board's purpose to secure friendly and harmonious coöperation of all the forces and agencies interested in the prevention and cure of disease so that

a more efficient service will be rendered. The physicians must accept the responsibility for, and make a practice of, immunization of children under school age. Some of the heaviest onslaughts of diphtheria occur before the age of six or seven years, and the State Board is developing a program with the physicians of the State, through the county societies, by which the family physician will, at a proper time, send a card of notification to the parents that the child should be immunized. The Board believes that the great majority of parents will heed this advice and that the physicians are perfectly willing to perform the immunization on the same basis that they render other professional service to their patients. We hope to furnish duplicate cards which will be forwarded the health department and will give statistical evidence of the number of children who have been immunized. These figures, compared with the birth statistics, will give an excellent estimate of the number who have not been immunized.

Intelligent effort along similar lines will unquestionably greatly increase protection to childhood, lessen the work of the health officer, and add to the practice of the physician.

An intelligent appreciation of the problem on the part of all, a little more of harmonious coöperation, and a little less of caustic comment, will unquestionably go far toward solving the problem.

PERINEPHRITIS—SUPPURATIVE AND NONSUPPURATIVE*

By CHARLES PIERRE MATHÉ, M. D.
San Francisco

DISCUSSION by George F. Schenck, M. D., Los Angeles; Robert V. Day, M. D., Los Angeles; Frank Hinman, M. D., San Francisco.

INFECTION of the perinephritic tissues is of great interest to all studying kidney diseases because of extreme difficulty in diagnosis resulting from meager clinical signs, obscure symptoms, and lack of urinary disturbances. Perinephritis is a term applied to inflammation of the celluloadipose tissue surrounding the kidney and includes the renal capsule. In Germany the term "perinephritis" is limited to inflammatory processes of the kidney capsule, and the name "paranephritis" is applied to those involving the perirenal fat. These distinguishing terms, however, have not been generally adopted. The type of acute perinephritis which is secondary to inflammatory conditions of the kidney, such as nephritis, cortical abscess formation, tuberculosis, nephrolithiasis, etc., is often unrecognized on account of being overshadowed by the pathological findings presented by the kidney itself. Likewise, primary perinephritis is unrecognized because the adjacent healthy kidney causes no symptoms and fails to reveal any pathologic findings in making a urological examination. Primary and secondary suppurative conditions of the perirenal tissues, commonly known as perinephritic abscess, also present a difficult problem of differential diagnosis; yet treatment of these conditions, in order to be efficacious, must be instituted early. In making routine autopsies, I have been impressed by the frequency of perinephritis which had, in many instances, entirely escaped the attention of the attending physician. In the course of making surgical inter-

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* Read before the Urology Section of the California Medical Association at the sixty-first annual session, Pasadena, May 2-5, 1932.

ventions on the kidney, I have observed inflammation of the perirenal tissues in all stages of development, viz., suppuration, resolution, and cicatrization. In some instances these inflammatory processes were entirely unsuspected; in others, they had been recognized by their signs and symptoms. These observations prompted me to make a study of perirenal infection, correlating their signs and symptoms for the purpose of classifying, clarifying, and facilitating their recognition in the future.

HISTORICAL NOTE

As early as 460 B. C., Hippocrates, in chronicling his daring operations on the kidney, described perinephritic abscess and advised "as soon as a swelling has appeared in the region of the kidney, one should incise it down to the kidney." Yet thorough understanding of suppurative and nonsuppurative perinephritis is of quite recent date. Isolated observations were made by Chopart and Civiale in the early part of the nineteenth century; but it remained for Rayer, who in 1839 made a thorough study, to give us a rational classification of these infections, dividing them into primary and secondary groups. A little later Trousseau made a most excellent contribution on perinephritic abscess; since then others have added very little to his classical description of the pathogenesis of this condition. Later Nieden, Rochet, Gibney, Hartmann, Kuster, Albarrán, Jordan, Legueu, Guiteras, Braasch, Hunt, Peacock, Brunn, and Rhodes added important observations. The principal pioneers in blazing the way of surgical relief of painful perinephritis were Le Dentu, Israel, Rovsing, Edebohls, and Pousson. The works of Edebohls and Pousson on the surgery of nephritis were epoch-making. Later contributions by Von Lichtenberg, Kolischer, and O'Connor on nephrolysis have done much to emphasize the importance of surgical intervention in indicated cases.

ETIOLOGY

The classification of suppurative and nonsuppurative perinephritis is made in the following table. Limitation of space will not permit me to discuss its etiology and portal of entry in greater detail in this article. The etiology of perinephritis, characterized by fibrosis, which has been recognized very recently, is obscure; yet, in spite of this obscurity, the etiology of perinephritis is of great importance because of the great suffering associated with it, which has been often attributed to other lesions of the kidney and referred to as nephralgia. Most of the older writers, *i. e.*, Israel, Guiteras, Lott, etc., were of the opinion that perirenal inflammation was usually secondary to kidney lesions, being transmitted by the blood or lymph stream or by direct invasion. But the more recent work of Doberauer, Rehn, and others has shown that infection of the renal cortex and perirenal fat might occur independently. Infection of the perirenal fat alone occurs when selective organisms lodge in the end arteries of the network made up by the capsular branches of the renal, suprarenal, spermatic or ovarian, lumbar, colic, and superior and inferior mesenteric arteries.

CLASSIFICATION OF SUPPURATIVE AND NONSUPPURATIVE PERINEPHRITIS

- I. Nonsuppurative perinephritis.
 1. Fibrosis of kidney capsule.
 2. Sclerosis of perirenal fat.
 3. Hypertrophy of perirenal fat (lipoma).
 4. Fibrolipomatosis of cellulo-adipose perirenal tissues.
 - A. *Primary.*
 - a. Hematogenous: Secondary to foci elsewhere in the body.
 - b. Toxic: Secondary to generalized infections such as smallpox, scarlet fever, influenza, puerperal fever, etc.
 - c. Traumatic: Resulting from contusion of perirenal tissues or infection of hematoma.
 - B. *Secondary.*
 - a. Resulting from lesions of the kidney, such as nephritis, pyelonephritis, tuberculosis, nephrolithiasis, etc.
 - b. Resulting from inflammatory conditions of the skeletal and muscular structures making up the renal fossa such as myocytis, spondylitis, osteomyelitis, etc.
- II. Suppurative perinephritis.
 - A. *Primary.* (Independent of kidney lesions or those of neighboring thoracic and abdominal organs.)
 - a. Hematogenous: Secondary to foci elsewhere in the body—skin lesions such as boils, furuncles, carbuncles, impetigo, eczema, etc.; osteomyelitis, paronychia, etc.
 - b. Toxic or hematogenous: Secondary to generalized infections such as smallpox, scarlet fever, typhoid fever, influenza, puerperal fever, anthrax, gonorrhea, etc.
 - c. Traumatic: Caused by lowered resistance of perirenal tissues resulting from contusion, infection of small and large hematoma, wounds, etc.
 - B. *Secondary to the following extraneous lesions:*
 - a. Kidney diseases: abscess formation, carbuncle, pyelonephritis, pyonephrosis, tuberculosis, lithiasis, etc.
 - b. Suprarenal diseases such as Addison's disease, infections of adrenal gland, etc.
 - c. Intestinal lesions: appendicitis, infections of the duodenum, intestines, and colon.
 - d. Affections of the abdominal and pelvic organs: spleen, pancreas, prostate, uterus, etc.
 - e. Infections of the skeletal and muscular structures making up the renal fossa: tuberculosis of the spine, myocytis of psoas muscle, etc.
 - f. Thoracic lesions: suppurative pleurisy, lung abscess, suppurative mediastinitis, etc.
 - g. Postoperative: Abscess formation after nephrectomy: secondary to silk sutures, to leaving portions of infected kidney behind, to tuberculous involvement of the perirenal tissues and to insufficient drainage after kidney operations.
 - h. Unusual conditions: Secondary to foreign bodies such as bullets, etc.

SIGNS AND SYMPTOMS

I. *Nonsuppurative Perinephritis.*—The onset of perinephritis is insidious; it is characterized by pain, hematuria, and occasional tumefaction of the kidney. This pain is usually experienced in the upper abdomen or loin and is of the constant, dull



Fig. 1.—Ureteropyelogram in vertical position of male, age 34, presenting persistent fever, pain and tenderness in left kidney region and slight leukocytosis. Note obscuration of the psoas shadow and immobility of the kidney. Perinephritic abscess suspected, but at operation cicatrizing perinephritis was encountered which had encased the kidney in an inelastic shell impairing its function and anchoring it to the surrounding structures.

variety, nonradiating in character. It might also simulate the form of renal colic which is usually associated with calculous disease, strangulation of the kidney, and ureteral stricture. It is persistent and does not yield to medical treatment, gradually wearing down and weakening the patient. Perinephritis is often accompanied by varying degrees of interstitial nephritis which might be well advanced or relatively of very small degree. This associated nephritis may not give rise to any signs, yet the accompanying perinephritis may be very extensive although no albumin nor casts are found in the urine. Hematuria occurs in a certain percentage of cases; in others red blood cells are found only by making a microscopic examination of the urine. It is sometimes caused by an associated nephritis, but in most cases the blood is due to strangulation and congestion of the kidney, resulting from compression by the cicatrizing perinephritis, which tightly encloses the kidney in a nonelastic shell. In nonsuppurative perinephritis there is usually no fever and no leukocytosis. In some cases there is slight elevation of temperature, causing one to confuse it with perinephritic abscess. Such was the case of Mr. W. M., who entered Southern Pacific Hospital on September 10, 1931, because of constant, dull, aching, non-radiating pain in the left loin, chills and fever, malaise, and anorexia. Urological examination revealed tenderness in the costovertebral angle,

obliteration of the psoas shadow, and a normal kidney which was found to be firmly fixed to the surrounding structures. We thought that we were dealing with a perinephritic abscess and decided on surgical intervention. In exploring the renal fossa we failed to encounter suppuration; and the perirenal fat was found to be involved by an inflammatory process undergoing resolution. Careful inspection of the kidney failed to reveal any cortical abscesses, but pathological examination of the excised perirenal fat revealed subacute, non-tuberculous, cicatrizing perinephritis. The patient made an uneventful recovery; the wound healed and he has been relieved from the pain of which he complained.

In some cases there is enlargement of the kidney, particularly in that type of perinephritis characterized by fibrolipomatosis in which the fatty capsule has become hypertrophied, hardened, and thickened, involving the entire renal fossa and sometimes invading the renal parenchyma itself. (See Fig. 1.) Palpation of the kidney with employment of a fine sense of touch, so well developed by the older masters, will aid in distinguishing the fibrolipomatous type of perinephritis from enlargement of the kidney due to other causes.

Immobility of the kidney is a characteristic sign of perinephritis and cortical abscess of the kidney. Lack of motion of the kidney during respiration was first described by Albarrán in the latter part of the last century, who pointed out that one could often diagnose perinephritis with adhesions from other lesions. The following are his exact words: "Du fait que le rein augmenté de volume à la palpation, ne présentait pas de mobilité spontanée, pendant que le malade exécutait de grandes inspirations."

Lack of normal mobility or descent of the kidney as determined by making a pyelogram in the vertical position was first described by the author in 1925. It is a very important differentiating sign in the diagnosis of suppurative and non-suppurative perinephritis as well as inflammatory lesions of the renal cortex. Its reliability has been verified repeatedly by operation for the past seven years. Another diagnostic point is displacement of the ureter which is caused by hypertrophy of the perirenal fat or by adhesions of the cicatricial tissue of the perinephritic space to the blood vessels making up the renal pedicle.

II. *Suppurative Perinephritis*.—Like perinephritis, the onset of perinephritic abscess is rarely sudden. The abscess develops rather slowly, does not manifest itself for some time, and is usually discovered only after it has produced general symptoms characterized by persistent fever, chills, obscure abdominal symptoms, and additional signs of encapsulated infection. Of all the signs and symptoms, fever is the most constant and reliable guide in diagnosis; it, the fever, is usually ushered in with a chill, is remittent in type, and because of this persistent elevation of temperature perinephritic suppurative processes are often confused with typhoid fever, ulcerative colitis, influenza,



Fig. 2a.—Ureteropyelogram in horizontal position of female, age 30, presenting persistent pain and tenderness in left kidney region over a period of ten years. The position of the kidney is indicated by markings on the lumbar vertebrae, the upper pole being located opposite the transverse process of the twelfth thoracic and the lower pole opposite the lower portion of the body of the third lumbar vertebrae.



Fig. 2b.—Ureteropyelogram in vertical position of same case. The right kidney makes quite an excursion caudad, whereas the left kidney remains anchored in place. Pyelonephritis diagnosed because of persistent renal pain and immobility of the kidney. Operation on April 27, 1932, confirmed extensive cicatrizing perinephritis.

pleurisy, malaria, and other infections. Pain is quite variable, usually of the constant, dull, nonradiating variety, located in the flank or upper abdomen. In patients presenting second and third degree ptosis of the kidney, the pain may be very low in the abdomen, causing one to mistake perinephritic abscess for cholecystitis, appendicitis, salpingitis, pancreatitis, splenitis, hepatitis, and other abdominal conditions. In some cases the pain experienced in the renal fossa is rather sharp and may radiate to the abdomen, umbilicus, scrotum, or shoulder. Gastro-intestinal symptoms—nausea, vomiting, and constipation—are quite common. I recall a school teacher, age twenty-three, presenting pain in the upper abdomen, fever, and leukocytosis over a period of six weeks, who had lost forty-three pounds because of persistent nausea and vomiting. The severity of the gastro-intestinal symptoms distracted the attending physician's attention from a perinephritic abscess secondary to renal carbuncle which was later successfully treated by surgical drainage.

Tumefaction of the renal fossa is an important diagnostic sign. The swelling is usually associated with the kidney, does not move with respiration or with change of posture. Tenderness of the costovertebral angle, spasm and rigidity of the overlying musculature, congestion and reddening of the superficial skin, occur only after the abscess has attained large proportions, at which time it presents little difficulty in diagnosis. Needling the retrorenal space for the purpose of withdraw-

ing pus for diagnosis is not without danger, particularly if the abscess happens to be located in front of the kidney. I recall a case of perinephritic abscess secondary to a boil in the gluteal region in which repeated punctures of the renal fossa elicited blood, but never pus. At operation an abscess was found anterior to the lower pole of the kidney, and in order to have entered it with a needle it would have been necessary to have traversed the entire kidney.

Examination of urine collected directly from the kidney in suspected cases offers little aid. In fact, in perinephritis, etc., there is a paucity of urine findings as compared to the severity of the illness. It usually shows slight trace of albumin, a few leukocytes and organisms and an occasional cast such as one finds in general infections such as pneumonia, typhoid fever, influenza, etc. In 1911 Baum showed that a certain percentage of cases of perinephritic abscess presented staphylococci in the urine if one would take the pain to centrifuge the urine over a long period of time and subject it to culture. Both Braasch and the author have been able to discover staphylococci in only a rather small percentage of such cases, and this sign, although of great assistance when present, occurs too infrequently to be of material value.

DIFFERENTIAL DIAGNOSIS

Many differential points in the diagnosis of suppurative and nonsuppurative perinephritis have been considered in the discussion of their signs and symptoms. The presence of persistent fever,

pain and tenderness in the kidney region, with lack or at least paucity of positive signs of infection in the kidney itself, should cause one to suspect perinephritis with or without suppuration.

The employment of the x-ray is of great aid. In cases of perinephritic abscess, fibrolipomatosis or extensive cicatrizing perinephritis, there is often obscuration of the margin of the psoas muscle, lower ribs, transverse processes of the lumbar vertebrae, and the kidney itself. The margins of the opaque shadows cast by these bony and muscular structures are rather indefinite and are not as sharply defined as in normal cases. This point was emphasized by Alexander and Revesz. Another diagnostic point is curvature of the spine with convexity away from the abscess. And this has been emphasized by Alexander, Lipsett, and Beer. Peacock recently pointed

out the great diagnostic value of displacement of the kidney and ureter anteriorly and laterally due to tumefaction of the renal fossa, so well demonstrated by employing stereoscopic films. As has been mentioned before by the author in this and other papers, lack of renal mobility, ascertained by taking a pyelogram in the vertical posture, is of great importance in determining suppurative and nonsuppurative perinephritis as well as abscess formation of the cortex of the kidney. Still, with regard to x-ray, obscuration of the structures making up the renal fossa has been the subject of considerable speculation. In some cases it is due to the collection of pus in the renal fossa, the thickening of the fatty capsule due to fibrosis, hypertrophy of the perirenal fat, or to the edema usually associated with these inflammatory lesions. Occasionally a case of peri-arthritis, originating from spinal or hip disease, has been mistaken by the urologist for suppurative or nonsuppurative perinephritis. I wish to emphasize that these diagnostic roentgenological points are of value *only* when they are considered together with a careful study of the history, clinical course and findings in each individual case.

TREATMENT

A certain number of cases of inflammatory processes of the perirenal tissues undergo resolution spontaneously, causing no further symptoms



Fig. 3a.—Ureteropyelogram in horizontal position of a clergyman, age 45, presenting persistent pain in solitary kidney ten years after nephrectomy of its fellow for pyonephrosis.



Fig. 3b.—Ureteropyelogram made in the vertical position, demonstrating the author's sign: lack of renal mobility which is always demonstrated by making a pyelogram in the vertical posture and is due to suppurative and nonsuppurative perinephritis or cortical abscess formation of the kidney.

to the patient nor damage to the kidney. Other inflammatory conditions result in frank suppuration which may be limited to the renal fossa or may rupture into the lung, peritoneal cavity, or into the skin of the loin. Others result in sclerotic thickening of the perirenal capsule which may surround the kidney and ureter, impairing the functional activity and efficiency of the kidney and obstructing the outflow of urine. This results in hypostenuria, a term coined in order to depict the inability of the kidney to adjust itself to increased demands on its functional activity by reason of its being encased in a hard, inelastic, fibrous shell formed by fibrosis of the perinephritic tissues, which impairs the velocity of the blood stream in the kidney and hampers its efficiency. In others there is a hypertrophy of the perirenal fat, so-called fibrolipomatosis, which may involve the renal fossa and invade the hilus of the kidney and renal parenchyma itself. (See Fig. 4.)

Undoubtedly a certain number of cases of nonsuppurative perinephritis undergo resolution, causing little or no damage to the kidney nor further disturbance to the patient and require no further treatment. But for the cases in which fibrosis of the renal capsule and cicatrization of the perirenal fat cause persistent pain and impairment of renal function, surgical intervention is the only chance for relief.

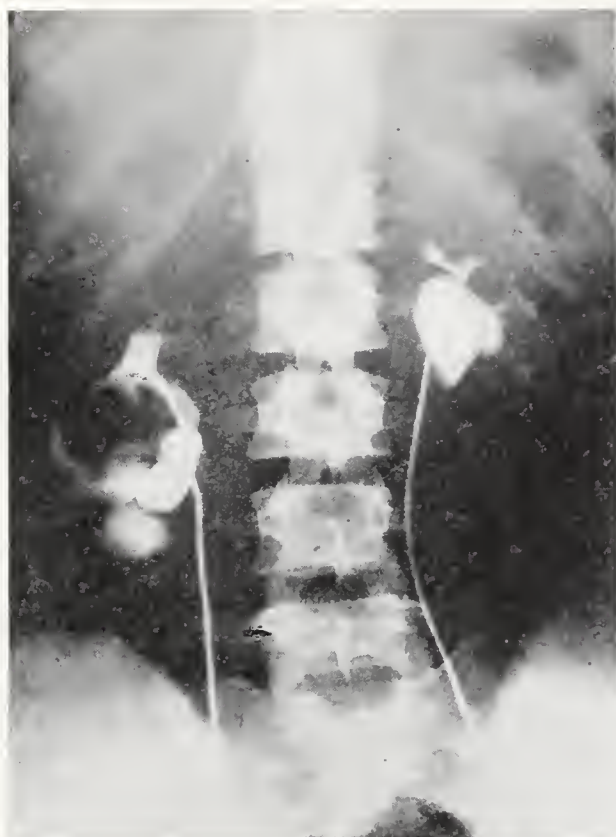


Fig. 4a.—Bilateral ureteropyelogram of female, age 29, presenting right-sided lumbar pain and tenderness of costovertebral angle. Note bizarre pyelogram presenting a pressure defect of renal pelvis.



Fig. 4b.—Specimen removed by operation demonstrating invasion of the parenchyma of the kidney by fibrolipomatous infiltration of the perirenal fat, due to advanced perinephritis.

Nephrolysis, which consists of freeing the kidney of its cicatricial investment, and of destroying its pathological conglutinations, adhesions and attachments to surrounding structures, was first performed by Rovsing and then later advocated by Kolischer and O'Connor. Unfortunately this beneficent operation has not been popularized and is rarely employed, if it is not entirely overlooked by the profession. In properly selected cases it frees the patient from great suffering and restores the kidney to normal function. Such a case is that of Rev. T. O., who entered St. Mary's Hospital on April 9, 1931, because of persistent, dull pain, and the sensation of fullness in the left lumbar region. The right kidney had been removed nine years before because of pyonephrosis. Pain in the opposite kidney occurred some five years later and was attributed to pyelonephritis and stricture of the lower ureter as well as to compensatory hypertrophy of the kidney. In spite of the fact that the infection in the remaining kidney had been cleared up by routine lavage and the ureter dilated to fifteen (Charrière), the symptoms continued. As one could hardly attribute the persistence of pain in the remaining kidney to compensatory hypertrophy some ten years after nephrectomy of its fellow, a complete investigation of the kidney was repeated. In making a pyelogram of the solitary kidney, it was found to be immobile in the vertical position, being anchored to the surrounding structures by dense adhesions. (See Fig. 3.) There was obscuration of the shadow of the psoas muscle, vertebrae, and lower ribs. Surgical intervention was decided upon and, on approaching the kidney, it was found

to be surrounded by a shell of thickened, indurated, sclerotic tissue which involved the perirenal fat and capsule of the kidney. The major portion of the thickened perirenal fat was removed and the kidney partially decapsulated. The patient made an uneventful recovery and was relieved from his debilitating pain, which in his case was unquestionably due to cicatrizing perinephritis.

In cases in which fibrosis is limited to the true capsule, decapsulation alone will often suffice to relieve pain and benefit any associated nephritis. In stripping the renal capsule it is well not entirely to separate it from the kidney. After freeing it from the kidney, one should replace it on its convex surface, facilitating future exposure of this organ should surgical intervention be required at a later date. In cases in which pain is marked, it is well also to perform denervation or renal sympathectomy. This consists of severing the nerves of the kidney which are found to be located on the superior surface of the renal artery and its main branches.

The treatment of suppurative perinephritis, commonly known as perinephritic abscess, consists of surgical drainage. Although a small percentage of these cases might undergo resolution, the greater percentage require open drainage. In opening the renal fossa one must explore the entire renal loge, as the abscess may be located anterior and inferior to the kidney. It is well to explore the kidney, particularly that portion which is found to be in close proximity to the abscess, in order to detect single or multiple cortical abscesses or carbuncle of the kidney which, if left untreated, might defeat the purpose of the oper-

ation. The removal of pus by needling, or aspiration, was performed by Gaddy and by Hartmann in the latter part of the nineteenth century. This procedure, although of some value in limited cases, has given way to the more accurate method of wide incision which is more efficacious in the majority of cases.

In primary suppurative and nonsuppurative perinephritis it is indeed important to clear up foci elsewhere in the body, such as skin lesions. In secondary perinephritis, treatment should be instituted to eradicate lesions of the kidneys, thoracic, and abdominal organs and the numerous extraneous lesions—completely tabulated in the table accompanying this article.

CONCLUSIONS

1. Suppurative and nonsuppurative perinephritis occur independently in a certain number of cases, as well as being secondary to diseases of the kidney and other extraneous lesions.

2. Chronic perinephritis is divided into (1) fibrosis of the kidney capsule; (2) chronic cicatrizing perinephritis with sclerosis of the perirenal fat; (3) fibrolipomatous perinephritis in which the fatty capsule is sclerosed, indurated and hypertrophied, sometimes forming a veritable lipoma which may invade the kidney parenchyma; and (4) suppurative perinephritis or perinephritic abscess in which the inflammatory processes have undergone suppuration.

3. The diagnosis of chronic perinephritis is obscure. Important points in distinguishing it are persistent pain, absence of urinary findings, and (the author's sign) lack of renal mobility, as evidenced by taking a pyelogram in the standing position. This lack of renal mobility demonstrates without any doubt that there are inflammatory processes of the perinephritic tissues which anchor the kidney in place.

4. The most important points in the diagnosis of perinephritic abscess are persistent fever, relative paucity of urine findings, and obscuration of the roentgenological shadow of the kidney, muscular and skeletal structures of the renal fossa, displacement of the ureter and immobility of the kidney as evidenced by palpation, and making a pyelogram in the vertical position.

5. The treatment of persistent, chronic, cicatrizing and fibrolipomatous perinephritis consists of nephrolysis and partial decapsulation by which the kidney is decompressed and liberated from its pathological encasement, adhesions, and conglutinations.

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DISCUSSION

GEORGE F. SCHENCK, M. D. (Westlake Professional Building, Los Angeles).—The most significant and most interesting part of Doctor Mathé's paper is that which deals with nonsuppurative perinephritis. The condition occurs to a variable degree with all of the diseases of the kidney that are of bacterial origin. In those conditions where primary perinephritis occurs it is often difficult to make a diagnosis. Doctor Mathé has previously contributed an original point that is

a material aid in making the diagnosis; and that is, fixation of the kidney to the contiguous tissues producing immobility, which is manifested by taking kidney pictures with the patient standing.

Heretofore, we have not placed sufficient clinical significance on nonsuppurative perinephritis as a cause of discomfort to the patient, and as a source of constant damage to the kidney.

Suppurative perinephritis, commonly known as perinephritic abscess, frequently produces problems in diagnosis. The condition may simulate almost any disease in the chest, gastro-intestinal tract, or regional muscular and skeletal systems. The condition is masked more than half the time by the primary renal pathology. None of the symptoms or roentgen ray findings are by any means constant. The obliteration of the outline of the psoas muscle, curvature of the spine away from the abscess, and displacement of the kidney and ureter anteriorly and laterally are very suggestive when present. The urinary symptoms and findings are variable and are of little aid in making the diagnosis. The leukocyte count, as a general rule, is high, 10,000 to 30,000. A dull loin ache is perhaps the commonest and most significant symptom of nonsuppurative and suppurative perinephritis. Pain is often deceiving, but if localized in the loin and costo-vertebral angle, it is significant. Usually the pain is aggravated by motion and the patient walks with a rigid back. The temperature varies from zero to 104-105. It may be fulminating, or of the typical picket-fence type. If the infection is severe, chills usually precede the febrile onset, and may be followed by drenching sweats. Incidentally, the persistence of sweats is almost pathognomonic of suppuration.

Doctor Mathé has adequately emphasized the importance of complete kidney studies that include standing pyeloureterograms in these cases of primary and secondary perinephritis. The treatment is primarily surgical.

✽

ROBERT V. DAY, M. D. (Wilshire Medical Building, Los Angeles).—It has been a privilege to hear Doctor Mathé's classical presentation of this important subject, from a standpoint of both diagnosis and treatment. He is to be congratulated on working out the Mathé sign—original with him. A certain other sign in suppurative perinephritis, emphasized by Peacock a few years ago, is a greater or less tendency to fixity of the thigh as a result of the reflex contracture of the psoas muscle in perinephritic abscess. As a result of personal observation I am inclined to believe that staphylococci, without pus, will be found in the urine of more than half the patients, if a special technique is used in the fixation of the smear of the tiny urinary sediment.

I wish to emphasize the warning against needling. If pus is present, incision will be required. Failure to obtain pus by aspiration is no indication of its absence; withal needling may well result in a serious accident.

✽

FRANK HINMAN, M. D. (384 Post Street, San Francisco).—Doctor Mathé has given a very interesting and complete discussion of the perirenal infections. It is generally regarded that of the two sources, renal and extrarenal, renal is by far the commonest and some even regard it as the only source of perirenal abscess worth clinical consideration. Diagnosis is often extremely difficult. Many of these patients get well. Stereopticon pictures, with catheter in ureter, are often quite helpful as the catheter can be seen to go up around what would be taken to be an abscess. Tumors of the perirenal area are extremely uncommon, although there have been about eighty lipomata reported. The differentiation of these tumors from renal tumors is more a problem than from perirenal abscess.

PHYSIQUE AND PSYCHE IN PHTHISIS*

By KENNETH P. JONES, M. D.

AND

EMIL BOGEN, M. D.

Olive View

DISCUSSION by F. M. Pottenger, M. D., Monrovia; Aaron J. Rosanoff, M. D., Los Angeles; Frederick Proescher, M. D., San Jose.

MORE than two thousand years ago Hippocrates¹ wrote: "The form of the body peculiarly subject to phthisical complaints was the smooth, the whitish, that resembling the lentil; the reddish, the blue-eyed, the leukophlegmatic, and that with the scapulae having the appearance of wings." Throughout the succeeding centuries the belief that tuberculosis was the result of an inherited predisposition to the disease has persisted.²

In the course of time other types of individuals were found to develop pulmonary tuberculosis, and descriptions of "tuberculous diatheses" have been given by other clinicians that differ widely from those presented by the classical writers. Thus, Hufeland³ more than a century ago characterized the "scrofulous diathesis" as distinguished by a quite contrasting set of attributes, namely, "a short thick neck, jaws stronger and broader than common, head rather large in proportion to other parts of the body, especially the back part of the head, light-colored hair, face slightly bloated, its skin delicate, transparent, white, somewhat rosy, eyes blue and pupils very large, upper lip rather thick, nose a little swelled, red and shining. The whole body appears to be fat and well nourished, but on closer examination the flesh is found to be flabby and soft, it does not possess the resistance and elasticity which indicate health and vigor. The belly is larger than it ought to be."

VIEWPOINTS IN MODERN PATHOLOGY

With the development of scientific pathology, attempts were made to find internal signs of "predisposition" to tuberculous disease,⁴ and the founder of cellular pathology, Rudolph Virchow,⁵ himself, devoted much time and effort to attempting to demonstrate abnormal conditions of the lymphatic and hematopoietic system as preceding the actual development of the disease. Anatomical peculiarities, such as the "fixed" first rib and narrow thorax, small heart and even such "stigmata" as malformations of the pinna of the ear have been urged as important signs of an inherited predisposition to tuberculosis.⁶ Biochemical changes, especially the much vaunted "demineralization" of the French writers,⁷ have also been investigated with the same idea in mind. A rather pretentious anthropometric survey of a hundred patients led Dr. George Draper⁸ to some remarkable conclusions. He found, in tuberculous people, "The eyes are close-set in a rather narrow face, and the eye-slit is small. The neck is extraordinarily long. The trunk is a trifle short in relation to the lower extremities, and the chest tends to flatness. The shoulders tend to wideness

both in respect of trunk length and pelvic breadth. The lunulae at the base of the nails were very often absent."

Efforts have also been made to describe a tuberculous personality from the standpoint of psychology and psychiatry.⁹ The undue prevalence of the disease in the schizophrenic psychoses has led to the identification of the symptoms of the schizoid tendencies as indications of a predisposition to tuberculosis.¹⁰ Consumption has been considered by some writers as a mark of superior intelligence,^{11,12} by others as an evidence of constitutional psychopathic inferiority.¹³ Psychoanalysts have not allowed this opportunity to escape them, and the literature contains elaborate descriptions of the complexes and repressions precedent to the development of the disease.¹⁴

OPPOSING VIEWS

The most vigorous opposition to this conception of constitution or temperament predisposing to the development of phthisis we owe to the genius of Villemin, the Frenchman who first demonstrated the infectiousness of tuberculosis. In an exhaustive and keen analysis of the significance of heredity and "diathesis" in the pathogenesis of tuberculosis, he proclaimed that tuberculosis is due to an infecting agent and concludes: "It is doubtful whether these constitutional dispositions have a real authentic part, even in the slightest degree, in the aptitude to contract the disease."¹⁵

It was only after another twenty years that this infecting agent was actually identified by the genius of Robert Koch, and since then the earlier dominance of the idea of "diathesis" or "constitution" as the causative factor in the development of tuberculosis has subsided into the lesser claims of contributing or accessory phenomena. Nevertheless, "the subject of the predisposition of certain individuals to infection seems to receive nearly as much attention today as it did prior to the tubercle bacillus era."¹⁶

The extent to which environment and pathologic conditions may alter the appearance, and even the bodily proportions, has not been sufficiently investigated, and there is an unconscious tendency to attribute to the innate pattern of the individual all those appearances that are noted at the time of first examination. The explanation given by Villemin himself for most of the phenomena actually observed in patients with tuberculosis—that they are really effects and evidences of the actual existence of the disease process rather than predisposing factors antecedent to the infection—has more and more tended to pervade the professional attitude among phthisiologists. One of the most impressive descriptions of the effects of the tuberculous process in almost any extreme case of chronic fibroid phthisis is that given by the keen-eyed Araetaeus nearly two thousand years ago.¹⁷

"The voice is hoarse; the neck is a little bent, thin, and turned hither and thither feebly as though it were stretched; the fingers are thin, but thick around the knuckles, and in this condition the bones appear to be uncommonly large because the flesh is wasted around them; the nails of the fingers are curved; the belly is

* From the Olive View Sanatorium of the County of Los Angeles.

* Read before the Pathology Section of the California Medical Association at the sixty-first annual session, Pasadena, May 2-5, 1932.

shriveled and wide because, on account of emaciation, it does not contain as much flesh, compared with the fascia as it did before, nor has it preserved its roundness; on this account also the nails have become curved, because the flesh which abounds in the tops of the fingers and gives a certain kind of support to them is now made rather hard and solid; this, too, is why the disease affects the nails themselves. The nose is sharp and thin, the cheek bones stand out and are red; the eyes are sunken, bright and flashing; the countenance is swollen and pale or bluish; the thin parts of the cheeks are so adherent to the teeth that they give the individual the appearance of laughing. All other parts of the body are the same: everywhere there is thinness and absence of flesh; the muscles of the arms are not visible anywhere and there is not even a vestige of the breasts and the nipples stand out prominently; one cannot only count the ribs but it is even possible to detect literally where they leave off; the joints of the ribs where they are attached to the spine and the vertebrae are not even hidden and their insertion into the bone of the chest is plainly visible; the intervals between the ribs are concave and turned into the figure of a rhombus along the entire circumference of the bones. The precordium is empty and drawn up; the abdomen and the loins are adherent to the spine; the joints, the tibia, the hips, and the forearms are conspicuous, prominent, and devoid of flesh; even the spine, which before was hollow, stands out prominently above the vertebrae with the muscles on both sides consumed; the entire scapulae are visible, standing out like the wings of a bird."

This is the picture so frequently encountered in the terminal wards of general hospitals and tuberculosis sanatoria, and on the autopsy table; and it is by no means easy for the observer to recognize in this emaciated frame the remains of what may have been at one time a robust, heavy-set, and phlegmatic athlete. The changes in the appearance, due to bone changes from a pituitary tumor in acromegaly, so well brought out by Cushing and his followers, are not more marked or striking than those resulting from the invasion by the acid-fast bacillus and its products. The physician who has actually observed the transformation take place may himself begin to doubt whether the individual ever was of the stolid and solid build that he appeared on first examination; but resort to records and photographs will demonstrate that the changes have actually taken place. On the other hand, in our sanatoria we may also see the reverse transformation occur, apparently moribund patients, reduced by the ravages of the disease to the picture so graphically described above, may, through the magic of modern active treatment of tuberculosis, or even, at times, in the absence of any recognizable therapy, take a new lease on life, fatten up, and blossom out as a completely different-looking individual.

But even though great changes are undoubtedly produced by the disease itself, the impression persists in many quarters that there may be some difference in bodily build or personality make-up that is antecedent to the invasion by the tubercle bacillus, a precursor or prepared soil, as it were, for the development and spread of the infection. Clinical observation attributes to starvation, inhalation of silica dusts, and other environmental factors an important rôle in accelerating the course of pulmonary tuberculosis; it is but natural, therefore, to inquire whether any preëxisting conditions, inherited or acquired, may have existed

prior to the development of the acid-fast infection itself, conditions which may accentuate the progress of the disease and darken its prognosis.

PREDISPOSITION

In view of the widespread popular belief in the importance of the constitution or predisposition in the development of tuberculosis, and the frequent assumption of such a relationship in the scientific and medical literature, an objective investigation appeared desirable. Clinical impressions, uncontrolled by comparably recorded observations, are notoriously unreliable, and the importance of modern statistical methods in the evaluation of the data has been far too often overlooked. Of course, it is recognized that the mere demonstration of a statistical correlation between phenomena, such as the disease and the measurements and other observations on the patients, is in itself of no convincing value in distinguishing between the causes and the effects of the pathologic entity. However, this distinction is necessarily premature until the actual concomitance has been established. After correlation is once demonstrated, further investigations are in order to elucidate the exact causal significance of the findings.

STUDIES AT OLIVE VIEW SANATORIUM

A study was therefore undertaken of patients at the Olive View Sanatorium,* designed to reveal the relative incidence of the different signs and symptoms of tuberculous "constitution" or "diathesis" as suggested by the host of authors who have discussed these matters in patients with different amounts of tuberculous infection and with different apparent outlooks for recovery. The study was intentionally limited to patients with undoubtedly advanced lesions of pulmonary tuberculosis. They have been classified, on the basis of their present capacity for activity, into ambulant patients whose lesions are apparently quiescent, including those who are now working in the institution, and bedfast patients with active or recently active lesions, including those with progressive disease where the prognosis is practically hopeless.

A hundred such individuals of each sex were subjected to an intensive physical, anthropometric, anthroposcopic, and functional investigation to see if any differences in the findings could be noted between the ambulatory patients, who are apparently on the road to recovery, and the bedfast patients, who appear to be more sadly stricken. This included twenty different bodily measurements, taken with instruments especially constructed for this purpose; record of more than a score of visual observations that could not be readily reduced to numerical reckoning; and determination of the daily temperature, pulse and respiratory rates, the vital capacity, the breath-holding time, the strength of the forearm as measured with each hand on a spring dynamometer, the blood pressure, and the speed of motor movement as shown on a counting machine, as well as the fatigue revealed by the decrease in this speed in two successive half-minute periods. The gen-

* Olive View Sanatorium is the tuberculosis department of the Los Angeles County General Hospital, Unit One.

TABLE 1.—*Physique and Psyche in Phthisis.*

		Male	Female
Number of patients	Up	51	39
	Bed	49	61
Per cent American parentage.....	Up	52	56
	Bed	55	54
Per cent colored races.....	Up	20	15
	Bed	15	24
Per cent asthenic type.....	Up	35	49
	Bed	53	32
Per cent athletic type.....	Up	22	15
	Bed	14	10
Per cent pyknic type.....	Up	43	36
	Bed	33	58

eral type of body build was also noted, as nearly as possible, according to the classification described by Kretschmer.

They were also examined for the "personality" or psychologic and psychiatric evidences of deviations from the normal which have been suggested by different writers. For the estimation of native intelligence or mental age, the patients were asked the meaning of the words in the test list of one hundred words of increasing difficulty used in the Binet-Simon tests,¹⁸ and the number of words correctly recognized was recorded. In the first hundred of these instances, this test was supplemented by the performance of the army alpha examination; but the two measures gave so high a degree of positive correlation that it was felt that the simpler single measure was sufficient. In a smaller number the McCall multimental test was utilized, with similar conclusions.

As a general index of personality make-up, a rating scale was prepared similar to that used in the Downey will-temperament test,¹⁹ and filled out for each patient by the subject himself, his nurse, the doctor, an attendant upon the same ward, and by a neighboring patient well acquainted with the subject. These reports were graded according to the number of desirable, minus the number of less desirable, traits checked.

The Neymann-Kohlstedt²⁰ test was used as a measure of introversion-extroversion, not so much because of proved reliability of the test in measuring these qualities, as because this test as applied to three hundred patients in the Chicago Municipal Sanatorium²¹ had disclosed a bimodal distribution

of results which warranted further investigation. In other words, the Chicago workers had found that consumptives there observed tended to be either introverts or extroverts, and showed less than the normal incidence of neutrovert types.

The depression-elation test of Jasper²² was used in the hope that, crude as it appears to be, it might aid in illuminating the elusive "spes phthisica" of which so much has been written but of which so little is really known.

A modification of the Woodworth personal data sheet²³ was used in the hope that it might help to evaluate the relative incidence of psychoneurotic manifestations among the patients who were recovering, as compared with those who were stationary or getting worse. Of course, about a dozen of these questions may actually reveal only the presence of actual symptoms of tuberculosis, and therefore the norm for this group should be considered as about twice the maximum figure of fourteen, suggested for the general population.

The Kent-Rosanoff association test²⁴ was given these patients with the idea that it might reveal abnormalities not disclosed by other forms of tests. The very low incidence of individual or abnormal responses, however, justifies omitting the analysis of the results of this test at this time.

All of the examinations were performed by the same worker (Doctor Jones), using as nearly as possible the same technique and apparatus. The questionnaire studies were all presented to the patients in mimeographed form, to be filled out and handed back to the investigator, and they were all marked by the same worker with the same set of standards for evaluating the returns.

RESULTS NOTED IN OLIVE VIEW STUDIES

The one hundred patients of each sex who were examined represent a fair random sampling of the adult patients at the Olive View Sanatorium. The higher percentage of ambulatory patients found among the men reflects the policy of the physicians to get the men up and about quicker than the women, who are kept more strictly on bed rest, rather than any real difference in the state of the disease in the two sexes. Nationality and

TABLE 2.—*Anthropometric Data.*

Measures	Rubrics	Male		Female	
		Median	Range	Median	Range
Age	Up	26	22-31	27	24-30
	Bed	29	24-35	25	21-33
Height	Up	174	169-180	162	156-164
	Bed	174	168-179	161	156-165
Sitting height } Height }	Up	51	50-52	52	51-53
	Bed	50	49-52	52	50-53
Width } Height }	Up	161	154-166	169	160-175
	Bed	158	151-162	168	160-175
Weight } Height }	Up	22	21-24	20	18-22
	Bed	20	18-22	20	18-21
Width x depth	Up	52	48-58	42	40-46
	Bed	50	44-54	42	40-46
Depth } Width }	Up	76	72-84	78	72-80
	Bed	78	70-84	74	70-80
Bi-iliac } Biacromial }	Up	74	70-76	78	74-82
	Bed	74	68-76	78	74-82
Cephalic index	Up	77	75-80	79	77-81
	Bed	78	75-80	79	78-80
Interpupillary } Facial width }	Up	49	47-51	50	47-51
	Bed	50	47-51	51	49-52

TABLE 3.—*Physiologic Data.*

Measures	Rubrics	Male		Female	
		Median	Range	Median	Range
Blood pressure	Up	120	112-128	116	110-126
	Bed	114	110-122	110	100-116
Strength grip	Up	125	115-140	70	60-80
	Bed	120	100-140	70	60-80
Speed tapping	Up	120	110-130	102	92-110
	Bed	114	106-130	106	96-120
Fatigue tapping	Up	26	14-34	26	14-32
	Bed	22	16-30	24	16-32
Vital capacity	Up	3000	2700-3400	1800	1500-2200
	Bed	2200	1700-2800	1600	1200-2100
Breath holding	Up	29	22-39	19	14-25
	Bed	19	15-28	18	15-25

tuberculosis has been discussed in a previous study,²⁵ but it may be mentioned here that the races included in this study showed no marked differences in their distribution among the ambulatory and bedfast patients. The age grouping is also quite similar between the two sexes, averaging about twenty-seven years, and there appears to be no significant difference in the average age in the different groups of patients studied.

The height of the men averages, as might be expected, about twelve centimeters higher than that of the women, but there seems to be no difference in the average height in the different stages of the disease. The sitting height is just over half of the total height of these patients, being just a trifle greater, relatively, in the women than in the men, and with no particular difference in the distributions among ambulatory and bedfast patients.

The width, as measured between the crests of the iliac bones, divided by the height²⁶ is, as might be expected, markedly greater in the women than in the men, and is in both sexes slightly greater in the ambulatory patients than in those confined to bed. This difference appears to be too small to warrant any inference that the bedfast patients tend more to the linear or narrow type of build, and probably simply reflects the very slight increase in the width measurement resulting from better nutrition. That this is so is indicated by the fact that the difference is more marked among the men, in whom, as may be noted, the difference in relative weight among the ambulatory and bed patients is also more marked. The weight in pounds, divided by the height in inches²⁷ shows, it is true, fewer differences than were anticipated; but, particularly among the men, there was a relatively lower weight among the bedfast patients. That this is less evident among the women may

reflect the effect of the more frequent use of bed rest in this group.

In a recent study, Wertheimer and Hesketh²⁸ suggested that the volume of the trunk, relative to the height, was a fairer index to body build than merely a single linear ratio. Actually, on analysis, it appears that the cross-section area of the chest gives approximately the same results as the longer formula given by them. This shows little, if any, increase with increasing improvement among the patients, the slight difference among the men being again ascribable, perhaps, to the better nutrition found in the ambulatory group. Flatness of the chest has been considered an attribute of tuberculosis, while the deep chest is sometimes considered a sign of immunity. Neither in men nor in women did there appear to be any consistent variation in this characteristic with different conditions of the disease, the slightly deeper chests in the bedfast men, for example, being found only in the average and reversed in the examination of the lower limit of the median range.

The relatively broad shoulders claimed by Draper as a sign of the tuberculous constitution is absent in this group, the bed patients of both sexes having exactly the same biiliac-biacromial index as those who were up and around. The women, with relatively wider pelves, naturally showed a higher index than the men in this regard. The cephalic index varied from broad brachycephaly to slim dolichocephaly, but most of the patients showed a mesocephalic-shaped head, with little differences between the two types of patients, but naturally a slightly broader head among the women. The facial width was generally about twice that of the interpupillary distance, and showed a tendency to be slightly narrower in the bedfast patients of both sexes, resulting in a rela-

TABLE 4.—*Psychometric Data.*

Measures	Rubrics	Male		Female	
		Median	Range	Median	Range
Intelligence	Up	74	64-84	84	78-84
	Bed	76	66-84	78	66-86
Self judgment	Up	10	4-16	8	4-14
	Bed	12	6-16	12	6-16
Extroversion	Up	+2	-6-+8	-2	-10-+6
	Bed	0	-6-+4	-2	-8-+2
Depression	Up	1.7	1.5-1.8	1.6	1.5-1.7
	Bed	1.6	1.4-1.8	1.6	1.5-1.7
Psychoneurotic	Up	13	8-24	22	19-28
	Bed	16	10-25	17	11-24

tively broader interpupillary distance in this group. This finding, which is only to be expected in view of the differences in nutrition between the two groups of patients, is also just the reverse of the state described by Doctor Draper.

The general appearance of the patients, classified according to Kretschmer's²⁹ descriptions as asthenic, athletic, and pyknic, on the basis of simple inspection, showed a definite increase in the asthenic type among the bedfast patients among the men, and of pyknic types among the ambulatory men; but the reverse appeared to be the case among the women; and in both sexes the entire group of two hundred patients appeared to be fairly evenly divided between the so-called linear and lateral types of build. Excepting findings that are obviously related to nutritional status, no marked interrelationship between the different anthropometric measures was observed.³⁰

Physiologic measurements gave a little more satisfying results. The blood pressure was significantly increased in both sexes among the ambulatory patients, as compared with those confined to bed. The vital capacity was also distinctly higher in the ambulatory patients than in the bed patients of both sexes. The length of time that the patients were able to hold their breath was also greater among the ambulatory patients. These differences, although present in both sexes, were much more marked among the men, whose average results were, of course, much higher than those of the women. The relatively smaller differences in the vital capacity among the ambulatory women may perhaps be due to the higher number of these patients who are receiving pneumothorax treatment, which accordingly reduces the available pulmonary volume.

The strength of grip was definitely increased in the ambulatory men, as compared to the bed patients, and the speed of tapping on a counting device was also greater in the patients who were up, though to a much less significant extent. In the women, however, there was no such difference observed. The fact that the men who are in bed do little handiwork, while many of the women are thus occupied, may suggest that the greater part of this difference of muscular strength and speed is due to the effects of disuse, rather than to any specific effect of the disease itself. Fatigue, measured by the reduction in the rate of tapping in successive half-minute periods, is less marked in the bed patients of both sexes than in those who are up and around. This is as interesting as it was unsuspected, and deserves further investigation for its elucidation.

The mental age, as revealed in the responses to the Binet-Simon test set of words, was quite high, generally above the accepted sixteen-year-old standard, except in those patients who, because of foreign tongue, were not adapted to this test. The median intelligence, as measured by this test, was somewhat higher among the women, but the range was quite similar and there was no consistent difference between the findings in the ambulatory and the bed patients. It is suggested that the rather high vocabularies revealed by this test among patients with tuberculosis may reflect the

greater opportunities offered to these patients to use the library, the radio, the extension teaching services, and the time at their disposal for reading, talking, and study, as compared to the more exacting routine of industrial life.

Although the judgment ratings given by the patients for themselves were generally, as might have been expected, quite favorable, it was notable that the bed patients of both sexes gave themselves the higher ratings. To what extent this reflects the result of day-dreaming, with the absence of the disillusionment that comes to the ambulatory individual on actual trial of his powers, and to what extent it might be considered another manifestation of the "spes phthisica," a pathologic euphoria consequent on the disease process itself, cannot at this time be stated with assurance.

The introversion-extroversion test of Neymann and Kohlstedt showed most of the patients in the neutrovert zone, without any suggestion of the binodal distribution reported by the Chicago workers. There is a slight tendency to introversion noted among the male bed patients as compared to the ambulatory ones, and among the women in general as compared to the men; but the differences are too slight to justify much speculative interpretation.

The depression-elation test of Jasper showed most of the patients in the moderately elated zone, with little, if any, difference between the sexes or the different classes of patients. The frequently undue optimism shown by these patients in general, and the relative absence of the pessimistic replies that might be justly expected from a group of individuals whose chances in this world are slim at best, is evidence that the "spes phthisica" is a genuinely present phenomenon and deserves fuller consideration of its diagnostic and therapeutic possibilities, whether the phenomenon is due to the disease process itself, as has been maintained by those who considered the toxic effect of tuberculin as allied to that of alcohol or stimulants, or to the environmental factors resulting from sanatorium care, where gain in weight is the rule and cares and worries are deliberately put in the background.

The psychoneurotic index, as shown by the personal data sheet of Woodworth²³ revealed an average of about fifteen complaints among the men and about twenty among the women. In view of the symptoms of tuberculosis included in this sheet, these figures demonstrate an unexpectedly low incidence of neurotic types among our patients. The paradoxical increase in the number of complaints in the women who are out of bed, which was not noted in the case of the men, suggests that "spes phthisica" may have led the sicker women to suppress some of their legitimate complaints.

Since our subjects were of the selected kind of people admitted to the Olive View Sanatorium, and since exposure to tuberculosis varies greatly among different groups in the general population, it is naturally impossible to obtain a valid group of normal individuals with which to compare them. Our attention has therefore been directed mainly to the contrasts shown between those of our pa-

tients who were apparently recovering and those whose prognosis appeared less favorable. However, it may be interesting to note that the general population described by Draper—consisting apparently of New York hospital patients, averaging about 3.5 centimeters shorter than our group, about five per cent greater width-height index, and a slightly greater weight-height index among the women—showed less than one unit difference in sitting height over height, chest width times depth, chest depth over width, cephalic index, or male bi-iliac over biacromial measurement. The greater weight and width of his women patients may be explained by the fact that more than a fourth of them were gall-bladder cases. Comparisons of our data with the figures for the measurements of Yale University men show similarly little marked variation, despite the great racial differences.

SUMMARY

The only physical differences noted between tuberculous patients so sick that they cannot leave their beds and those already ambulatory and even working is that the bedfast patients tend to be slightly narrower and lighter, with reference to their height, than the ambulatory patients, obviously because of loss of weight from the disease. Loss of weight is more evident in the male patients because of the more efficient bed rest and treatment among the women. All other claimed and purported physical stigmata of tuberculosis were absent from our subjects.

Pathologic measurements showed that the blood pressure, vital capacity and breath-holding time were greater in the ambulatory subjects; but the differences were less marked among the women. Strength of grip and speed of finger movement was greater among the ambulatory men than among the bedfast men; but the differences were not found among the women. These differences might all be explained as evidences of the effect of the disease upon the lungs, and of the effect of disuse upon the skeletal muscles.

Psychologic tests failed to reveal any "inferiority" among these patients either in mental or psychiatric aspects. Most of the differences found might probably best be explained as effects of the peculiar environment of a sanatorium patient. Some indication of the existence of a pathologic euphoria, or "spes phthisica," however, might be inferred from some of the findings.

Careful quantitative investigation of a large group of patients of both sexes with varying amounts of pulmonary tuberculosis has accordingly failed to find objective support for any of the numerous popular generalizations concerning an anatomic, physiologic, or psychologic predisposition to tuberculosis, and suggests that the only difference between persons with tuberculosis and other persons lies in the effects of the infection and of the resultant environmental conditions.

Olive View Sanatorium of Los Angeles County
San Fernando, Los Angeles County.

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DISCUSSION

F. M. POTTENGER, M. D. (Monrovia).—Physiologic medicine requires a very close study of the physical and chemical constitution of the patient, and these are determined both by heredity and by environmental factors which modify the hereditary trends.

In their interesting study, Doctors Jones and Bogen rightly give consideration to the difference between patients who are ambulatory and those who are bedfast. There are so many variables that come in to determine a man's physical make-up and his psychical attitude that one is more or less lost when attempting to make a comparison.

When we are able to determine why one patient is able to bring about a healing of his primary infection and another is not able so to do, and why a resultant superinfection in one patient takes the form of predominantly proliferative disease, and in the other a predominantly exudative disease, we will probably have some information concerning predisposition.

We must remember the excellent work of Long, in which he showed the influence of glycerol upon an experimental infection. Guinea-pigs fed upon a diet rich in glycerol grow tubercle bacilli in much greater

numbers than those which are not so fed. That changes in chemical constitution affect tubercle bacilli is also suggested by the seasonal variation in the disease. It has been shown that the spring months are characterized by more metastases in tuberculosis in the lungs, more miliary tuberculosis and more meningeal tuberculosis than other seasons. It has also been shown that there is a difference in endocrine glands both as to size and function in different seasons. The relative amount of calcium and potassium in the tissues shows a seasonal variation, and as has been pointed out by Wade Brown, there is a greater tendency to metastases in experimental syphilis and experimental cancer in the spring than in any other season. All of this goes to show that our internal environment is a big factor in the activity and the healing of disease.

In discussing the physical and psychical elements which make up the individual, it is necessary to bear in mind that while they are different and distinct they are still inseparable. The emotional life of the individual affects his physical machine, and the working of the physical machine, on the other hand, influences man's emotional stability. Man is like the proverbial dog Rover. "When he is sick he is sick all over."

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AARON J. ROSANOFF, M. D. (2007 Wilshire Boulevard, Los Angeles).—It seems to me that Doctors Jones and Bogen have rendered a service to the profession by laying the ghost of certain traditional but apparently unfounded notions of constitutional peculiarities, physical and mental, as factors in the etiology of tuberculosis.

It must be admitted that statistics of mental hospitals and institutions for the feeble-minded and for epileptics show an abnormally high morbidity and mortality from tuberculosis, and this is especially so in connection with the chronic schizophrenias. This fact, however, may be, in my opinion, fully accounted for by the difficulty of securing the coöperation of such patients in organizing a hygienic mode of living and by the overcrowding which so generally prevails in such institutions. My impression is that an assumption that patients suffering from these mental disorders are constitutionally predisposed to tuberculosis would be a purely gratuitous one.

At the same time, I doubt if this paper fully disposes of the question of an inborn predisposition to tuberculosis. Indeed, it would not appear that the conclusions drawn by the authors carry any such implication. Such an issue as that of the relative importance of an inherited or inborn predisposition and of external factors in the etiology of a given disease, whether it be tuberculosis or something else, can best be settled by investigation of twins. If it be found that monozygotic twins are in general both affected, and that in dizygotic twins as a rule only one is affected, then a hereditary or germinal factor in the etiology of the given condition may be considered as established. Such a factor would not necessarily manifest itself in some demonstrable peculiarity of physical build or psychic constitution. It may consist, instead, of some chemical, metabolic, or immunologic peculiarity, or the nature of it may be difficult or impossible to ascertain. Nevertheless, such a distribution of the affection in monozygotic and dizygotic twins as I have referred to would definitely establish the existence of a hereditary or germinal factor.

Unfortunately this type of clinical material is not easy to find in amounts adequate for statistical treatment. As far as I know, only one fairly extensive study of such material has been reported in the medical literature, namely, a German study by von Verschuer, abstracted in *The Journal of the American Medical Association* of August 9, 1930, on page 427. That study is based upon investigation of seventy-five pairs of tuberculous twins, among which nineteen pairs were monozygotic twins. It would appear from that study not only that there is a hereditary factor in the etiology of tuberculosis, but also that such hereditary factor largely determines the exact extent and distribution of the tuberculous lesions in the various organs, regions, and tissues of the body.

FREDERICK PROESCHER, M. D. (San Jose).—The renewed interest of the medical profession relative to the correlation of physical constitution and disease readiness has occupied the attention of many investigators. Internists, surgeons, and psychiatrists have taken up the question as to whether or not there exists any relation in the physical make-up and the susceptibility to certain diseases. The relation of the susceptibility of tuberculosis and physical constitution especially has been in the foreground of medical interest.

The introduction of exact anthropologic measurements and modern statistical methods have replaced former vague, clinical descriptions and established firm bases for comparing the results of different investigators.

The very careful and critical investigations of Doctors Jones and Bogen have failed to demonstrate any peculiarity in either the physical or psychic make-up of patients with tuberculosis as compared to patients with active, progressive tuberculosis. Their results are in accordance with Eisenstaedt's investigations, but Ickert, by exact anthropologic measurements, found that from 48 to 64 per cent (nearly 80 per cent if mixed forms were included) of the tuberculous population of East Prussia were of leptosom habitus, as compared with the entire population of which from 14 to 15 per cent were leptosoms. Luxemburger, by exact statistical methods, has shown that there exists a close correlation between leptosom habitus, schizophrenia, and tuberculosis. Even when taking into consideration the unfavorable living conditions of these patients, this correlation exists. A comparison of the tuberculosis mortality (considering different age classes) of parents and children of schizophrenics, as compared with that of manic-depressives and the average general population, the schizophrenic families showed a much greater tuberculosis mortality. From the analysis of his cases, Luxemburger concludes that the susceptibility of tuberculosis is closely related to the leptosom habitus and the schizophrenic "anlage" (factor coupling) and is recessively inherited.

The results of Coerper are also of great interest. He investigated eleven tuberculous families where the parents were of different physical and mental types, and where either one or both were suffering from tuberculosis; all of the children were infected with tuberculosis. Children with like structure, either corresponding to that of the father or mother, showed the same clinical form of tuberculosis as the parent.

The most convincing proof of an inborn predisposition for tuberculosis has been established by Diehl and von Verschuer. They collected more than one hundred tuberculous twins and investigated the clinical course of the infection. The material was divided as follows: (1) Twins who exhibited exactly the same clinical form of tuberculosis or with only minor differences as to the appearance of the first definite clinical symptoms. (2) Twins with tuberculosis of different organs, and with great variation as to the length of time of infection and a variety of tuberculous lesions. (3) Twins where only one was manifestly infected with tuberculosis or where one had succumbed to tuberculosis while the other was not infected.

The percentage distribution of the monozygotic and dizygotic twins into the three groups was as follows: (1) M. Z., 69 per cent; D. Z., 21 per cent. (2) M. Z., 21 per cent; D. Z., 37 per cent. (3) M. Z., 10 per cent; D. Z., 42 per cent. In other words, the majority of the monozygotic twins showed a similar clinical course of tuberculosis, while in the dizygotic twins a discordance was apparent. They further found that with increasing age in the monozygotic twins the discordance became still less, while in the dizygotic it became considerably greater. They conclude that a hereditary factor is of great importance for the clinical course of tuberculosis and the distribution of tuberculous lesions in the organism.

These few quotations of the literature may suffice to show that the question of the relation of the constitution and inheritance to the susceptibility of tuberculosis is by no means definitely settled.

EVERY CHILD IS DIFFERENT

By WILLIAM PALMER LUCAS, M. D.
AND
HELEN BRENTON PRYOR, M. D.
San Francisco

DISCUSSION by Harold K. Faber, M. D., San Francisco;
Oscar Reiss, M. D., Los Angeles; Andrew J. Thornton,
M. D., San Diego.

OVERSTANDARDIZATION in many branches of child welfare has led to some mistaken conclusions as to what constitutes health. A common fault in constructing standards in the past consisted of collecting data on a series of children, finding the average or group tendency of some mental or physical trait and labeling this average "normal."

COMMENT ON SOME PRESENT HEALTH STANDARDS

Health standards now in use which do not recognize individual differences are poor. As an illustration, consider the widespread use of the height-weight-age tables in schools, public health clinics, and doctors' offices as a measure of nutrition in children. Too much significance has been attached to deviations from average weights for height and age. The usual belief among parents is that if a child is noticeably underweight, according to the height-weight-age table, he is necessarily malnourished. But the basis of this table is average weight for height and age.

It is impossible to label one weight normal for all boys or all girls of a given height and age because of their differences in body build. The height-weight-age table is a useful adjunct in measuring a child's nutritional status, but it must be considered as establishing average weight for a group, not normal weight for the individual.

WIDTH-LENGTH INDEX

Mathematical analyses have shown that body weight is more closely related to width of shoulders, chest, and hips than it is to height. Full details are given in Doctor Franzen's¹ monograph. Children inherit a slender or stocky or intermediate type of body build from their parents and are heavier or lighter than average in exact proportion as they are broader or slenderer than average for their age. We have worked with a width-length index which measures the relative breadth or body build of a child. Many elaborate methods of classifying body build have been worked out, but the very simple way of merely comparing width to length of body appears to be adequate.

The widest diameter of the crest of the pelvis divided by the height yields an index of build, which we have studied in relation to body weight.²

This width-length index increases directly with the relative breadth of the child, since it expresses the simple relationship of each body to itself. Empirically, it can be said that a low index means a slender child with small bones, and a high index means a broad child with large bones. Calculating the width-length index measures the amount of variation from the height-weight-age table averages that should be allowed for body build before diagnosing overweight or underweight. If a

child's width-length index is small he should weigh less than the height-weight table indicates, and if his index is large he should weigh more than the table indicates.

Obstetrical calipers or anthropometric spreading or sliding calipers may be used to measure diameters. No other special equipment is necessary and the time required to calculate the index is very small. Measurements should be taken with firm pressure on the skin.

EXAMPLES

Each child has a normal weight, which can be calculated for his build. For example, an eight-year-old boy was 52½ inches tall and weighed 57¼ pounds. His "normal" weight, according to the height-weight-age table, was 63 pounds; so he was labeled 9 per cent under weight by the school nurse. However, he was a slender-built boy with narrow diameters, and the ratio of the width of his body to his height shows he was 5½ per cent narrower than the average eight-year-old boy in his social group. Ideal weight calculated for his particular bony framework was found to be 59½ pounds. He was then found to be 2¼ pounds below his ideal weight.

A six-year-old boy was 44 inches tall and weighed 48 pounds. His "normal" weight on the height-weight-age table was 44 pounds; so he was labeled 9½ per cent overweight by the school nurse. But this boy was broad built, with large diameters, and the ratio of the width of his body to his height indicates that he was 7 per cent broader than the average six-year-old boy in his social group. His ideal weight for his body build was found to be 47 pounds, so he was actually one pound over his ideal weight.

A table of average indices by age and sex, computed from measurements of 1010 boys and 922 girls, is presented to show the basis of our calculation of normal body weight for build. Consideration of diameters or width measurements to arrive at proper weight for build is not new, having been described by Gray,³ Franzen,¹ Bakwin,⁴ and others, but the method of measuring the relationship of these width measurements to weight, as published two years ago, is new and has this very practical application.

SCHOOL REPORT PROCEDURES

Many physicians are now studying the individual from the standpoint of the kind and amount of his variation in any given trait from the aver-

TABLE 1.—Table of Mean Width-Length Indices by Age and Sex.

The width-length index represents the width of the crest of the ilium in per cent of standing height bi-iliac diameter X 100. It measures the relative breadth of the body. This table is based on measurements of approximately 2000 San Francisco children.					
Age	Male	Female	Age	Male	Female
0-1	173	175	9	158	159
1	168	172	10	158	160
2	167	171	11	157	161
3	166	166	12	157	162
4	162	163	13	156	163
5	161	161	14	155	163
6	159	159	15	155	164
7	158	159	16	154	164
8	158	159			

age figure for a group of similar age and environment. For example: Faber,⁵ Draper,⁶ and Pearl.⁷

However, at the present time, health reports sent home from the public schools at regular intervals inform millions of parents in America that their children are under or over "normal" weight. In the case of the child labeled overweight little is done unless he is very markedly overweight, when his parents may limit his diet somewhat. But in the case of the child labeled underweight the parents often become very much concerned and institute a program of high calorie, high-fat diet, additional meals, and forced feeding.⁸ This whole program is open to criticism. The mental attitude of the parents in their great concern may react negatively on the child, causing him to lose his natural desire to eat. Forcing food upon a child who does not need it may upset his digestive processes and may end in open rebellion. If a mother urges her child to eat some particular food because it is "good for him," he may come to believe that his eating is a very important thing in the life of his mother. His natural reaction, then, is to use this new-found power of unwillingness to eat as a method of self-assertion. Lack of hunger, then, may become a psychological attitude of negativism against eating developed by an over-conscientious mother who forces food in obedience to some artificial standard. Recognizing different food requirements in children of different types, coupled with a knowledge of child psychology, will solve most problems of anorexia.

APPLICATION TO ANIMALS

In the animal world we recognize physical differences and feed according to type.⁹ To borrow an illustration that carries the argument to the point of absurdity, suppose we should construct height-weight-age tables for dogs. We should, then, put the heights and weights of the pekinese, terriers, collies, great danes, and Saint Bernards all together and find the average which we would label normal. Then we would stuff the little pekinese and terriers and starve the great danes and Saint Bernards in our effort to make them all conform to our "normal" standard. The collies and other middle-sized dogs would just fit the standard and would thrive on the "normal" diet, but the dogs that were too large or too small would suffer.

CONCLUSIONS

A child should not be allowed to compare himself with bigger and stronger children on health ratings. An inferiority complex on health is as bad for a child as any other form of inferiority complex. The modern objective has been changed from an attempt to make all conform to an attempt to enable each to develop according to his individual capacities.

It is hoped that the simple method presented for calculating normal weight for body build may prove to be a practical application of our knowledge of body build in its effect on weight.

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DISCUSSION

HAROLD K. FABER, M. D. (Stanford University School of Medicine, San Francisco).—That the single standard of weight for height adopted widely and uncritically for measuring nutrition of children, especially in the schools, was almost certain to lead to serious misinterpretation and abuse, because of probable failure to recognize the importance of individual variations from a rigid norm, was foreseen by students of the measurement method almost from the beginning. In spite of warnings issued then and at frequent intervals since then, many school workers continue to compare individual children with these rigid standards and to warn parents that their children are underweight or overweight when they vary but slightly from the "normal" figures. Some six years ago I introduced what I hoped was an improvement on the Baldwin-Wood scale—a scale based on some 60,000 measurements of California school children, showing not a single standard but a range of weights for each inch of height, year of age, and sex—and on the printed table a warning was given that not even those children whose weights were not within the given range should be necessarily considered as abnormal, but merely in need of a medical check-up. The range given was intended to take care of the variation due to differences in constitutional type, or body build, without necessitating more measurements than were already being made or increasing the amount of work required by the teachers or school nurses. Even with these more liberal allowances and with the avoidance of comparing a child's weight with a single "standard" weight, the trouble was merely somewhat abated but not entirely removed. Children are still being reported from the schools as under or overweight when in fact they are neither.

The physician who sees such children in his office can correct the error either by exercising his common-sense, that is, by making a visual appraisal of the child's build and amount of body fat and on that basis an estimate of his nutritional state, or if he wishes to have a more objective measurement he can use the excellent method popularized by Doctors Lucas and Pryor—that of measuring width in addition to height and weight. The method is sound in principle, does not involve too much extra effort, and is quite practical. It is to be hoped that even with this method, however, a suitable allowance for individual variation will still be taken into consideration. It may be mentioned here that the thickness of body fat can be very simply measured by an excellent little calipers designed by Franzen. This measurement is of considerable value, since one of the chief aims of objective measurements of the nutritional status is to determine how much body fat is present.

The authors of this paper deserve our thanks for a contribution that merits serious attention.

OSCAR REISS, M. D. (1930 Wilshire Boulevard, Los Angeles).—The wide publicity given to height-weight-age tables as representing a correct index of nutrition has proved most unfortunate, for it has led far too many to believe that each individual child could be so developed as to reach "the average" established by these tables. And most parents wish and even believe it possible that their children can be made to reach above this average.

How firmly this notion is implanted in the lay mind is forcibly brought to our attention times without number. Hardly a day goes by but that one or more anxious parents appear in our offices imploring us to transform their perfectly fine but thin children into fat ones who will equal or surpass "average weights." How much of our time must continue to be spent carefully explaining that "every child is different," that there are hereditary limitations which cannot be overcome, and that a sense of well-being on the part of the child plus good muscle tone and tissue turgor, active response to environmental stimuli, good appetite and sleep, are far better indices of the nutritional state than conformity to height-weight-age tables.

Lucas and Pryor, in their paper, present a very simple and excellent method of classifying children according to inherited types of body build and by this means offer us a rational way of estimating the nutritional state.

The title of their paper sounds a truth that should be broadcast to all parent-teacher organizations, to all public health and school nurses, as well as to all associated with child-caring institutions.



ANDREW J. THORNTON, M. D. (3235 Fourth Street, San Diego).—The standard chart of weight for height and age of children has been most unsatisfactory. The modified chart that takes into consideration the tall slender, the short stocky, and the average types has also been unsatisfactory. Therefore I welcome most heartily this paper by Lucas and Pryor, which suggests a way out of our difficulty.

In order that this new method of computing child nutrition may become practical and usable in our everyday work, it seems to me that a more simplified method of application will have to be worked out.

The general practitioner or the school nurse is not going to bother with a problem in decimal fractions in order to send home a report about a child, and these are the persons who are keeping the mothers of the country stirred up with their reports about underweight or overweight among school children.

I shall be greatly interested in further developments along this line.

VETERAN HOSPITALIZATION PROBLEMS*

By WILLIAM H. GEISTWEIT, JR., M. D.

San Diego

WHEN prosperity reigned and money was plentiful, taxes were just "one of those things"—an annoyance and a necessary evil. When business was booming, merchants and the professional classes had all the business they could handle; so loopholes in business, taxes, or paternalism in government were just incidents and nothing to worry about.

THE NATIONAL BUDGETS

But today the entire picture has changed. We find the entire national income has decreased from \$85,000,000,000 in 1929 to less than \$50,000,-

000,000 in 1932, a drop of more than 40 per cent. Contrasted with a vastly lowered income, nationally and individually, our tax bill has mounted until today it aggregates \$10,250,000,000 for the federal, state, county, and municipal governments. Thus, in effect, every American works one day in every five, or sixty working days a year, to pay his taxes.

The picture up to this point affects every property owner and taxpayer. In this changed condition the medical profession has been as hard hit as any profession or business in the land. But from this point the brush begins splattering the medical profession, for the private practitioner not only pays his share of taxes, but a considerable amount of his tax money is used in financing government competition with him.

PRESENT COSTS OF THE CARE OF VETERANS

Witness: In the present budget there is an appropriation of \$48,000,000 for hospitalization, domiciliary and medical care of veterans, and an additional \$12,877,000 for hospital construction. By far the major portion of the first-named item is admittedly for the care of veterans whose injuries or diseases are in no way traceable to their military service.

EXTENSION OF CARE TO NONSERVICE DISABILITIES

The government's veteran disability policy, starting with the very proper care and treatment of those actually wounded, disabled, or sickened while in service, has been liberalized until it now includes hospitalization of men whose physical ills develop at any time, now or in the future. The result is that today the government owns and maintains 114 hospitals and domiciliary homes of which 69 are under the direction of the Veteran Administration, with 58,700 beds.

The menace of this liberal policy—the most surprisingly liberal in all history, as it pledges the government to perpetual care of the physical well-being of the veteran—not only to the treasury and taxpayer but to the medical profession, is evidenced by estimates of the medical council of the Veteran Administration that by 1950 there will be necessary 129,859 beds to care for the peak load of nonservice cases. This will involve, according to estimates based on present conditions, a cost for additional hospital construction of from \$160,000,000 to \$200,000,000, with an annual treatment cost of \$140,000,000. Embraced in this statement is the thought of a corresponding loss to the medical profession and private hospitals.

Authorities estimate that if nonservice-connected cases are eliminated, instead of more construction being necessary, there would be an excess of 40,000 beds when the already authorized hospital building program is completed; and that it would be possible to close enough hospitals to save \$30,000,000 in overhead alone. On October 31 last, there were but 29,106 service-connected cases occupying beds in hospitals administered by the Veteran Administration, the remainder, of course, being of nonservice disabilities or diseases.

* From the office of the secretary, San Diego County Medical Association.

THE MEDICAL PROFESSION AND THE GREAT WAR

No group suffered more than the medical profession during its war service, so no one can accuse it of lack of sympathy for those who fought and were disabled thereby. But the profession is unalterably opposed to governmental care of nonservice-connected disabilities, especially when the veteran is able to pay his way. What is just for the veteran is just for the civilian who saw no service. If competition with the medical profession and the hospitals on the part of the Federal Government is just, then the grocer, the clothier, and all the rest should be subject to the same treatment. The mere fact that a man did his duty overseas does not warrant perpetual care by the government while the man is neglected who performed the necessary civilian duties at the home base or who because of age, disability, or lack of opportunity for duty could not serve. The veteran with service-connected disability might receive a more just compensation for his blighted career if his comrades discharged unscathed, especially those able to pay their own way, were not putting the whole veteran group in a bad light by demanding free care.

EFFECTS UPON HOSPITALS AND MEDICAL PROFESSION

The effect of one phase of this policy on the medical profession and the nation's great private hospital business of more than 2,000 institutions, as well as a suggested road out, constructively planned, is succinctly told in a nonprofessional publication, *The Saturday Evening Post*, which, in an editorial in its January 7 issue, said:

Hospitals throughout the country are feeling the cramping effect of current conditions more severely than almost any other class of institutions. Even in good times they are run at a loss and must look to charitable citizens and to local welfare organizations to meet their deficits. This winter they are under pressure to give more free service than ever, with fewer paying patients to offset their costs.

Medical men, even those with large practices, are feeling the pinch of poverty, for they report they are collecting only from 10 to 20 per cent of their bills. Doctors and surgeons may starve, hospitals may go broke, but such are the traditions of medicine that the sick must be cared for at any cost.

Our hospital situation is becoming more and more grave. Only five-eighths of our existing accommodations are being used. More than three-eighths of the available beds—38 per cent, to be exact—are empty. In the face of those conditions, Congress, with its unfailing genius for devising new ways in which to spend other people's money, threatens to make them worse by building all over the land elaborate and costly hospitals for the care of sick and disabled veterans.

Such a course is as detrimental to the best interests of the veteran as it is to sound public policy. Already there have been bitter complaints from the mothers of veterans that their boys have been sent to hospitals so far from home that it is impracticable for their families to visit them. Such complaints are well founded. They will multiply in proportion as the practice becomes more widespread.

Veterans are entitled to care as near home as hospital facilities permit. It is manifestly unfair to send them to distant medical centers for treatment when they can be given as good care among friends and neighbors, where their families can visit them without inconvenience or expense and where they can still

have some share in home-town affairs. Local hospitals are local enterprises and they are usually sponsored by the best element in their communities. The government, instead of setting up destructive competition with these quasi-charities, should utilize their vacant accommodations and pay a fair price for the service rendered. Such a policy would be of interest to veterans and would react favorably upon struggling institutions from coast to coast.

That is just half the story. The other half is effectively stated by Dr. Thomas W. Bath of Reno in a report to the Nevada Medical Society from its Military Affairs Committee, in this wise:

There can be no other interpretation to the work of the Veterans' Bureau than to class it as in the business of state medicine. State medicine is an affair which every group of ethical men and women in the practice of medicine or nursing is vigorously fighting today. Every sick soldier or nurse has the supreme right to call to his bedside such physician or surgeon as is his or her choice.

Under the present plan the government is entering into business in direct competition to today's number of 156,440 physicians and surgeons, not to speak of tens of thousands of nurses. The government's bureau is attracting to itself a medical and surgical clientele from over 4,000,000 people, thereby taking away from the legitimate earnings of thousands of physicians, surgeons, and hospitals.

In addition, let me point out that the present hospitalization is ineffective, despite its liberality, because acute cases cannot be as quickly and efficiently handled in government hospitals, scattered as they are throughout the land, as in local, private hospitals in the very community where the case originates.

Now back to the principal thought—the cost of all this present paternalism of the government.

The plan of hospitalization and medical care today costs every family in America at least \$10 a year, and if outlined plans are approved the cost will be tripled. As expressed in Doctor Bath's report in the December CALIFORNIA AND WESTERN MEDICINE, page 370:

But we must not consider that this tax would be spread upon a pro rata or general average; for it is estimated that 3 per cent of the population of the United States pays the bulk of the government tax, while 12 per cent of the population makes up the entire remainder.

Thus the battle of the budget, now being fought out before congressional committees in Washington, has an importance to the taxpayer, and the physician taxpayer, never before attached to such hearings.

NATIONAL ECONOMY LEAGUE¹

Directing this battle for the taxpayer, and incidentally for our profession, is the National Economy League, whose representatives have already demanded a budget cut of \$450,000,000; a change in the method of hospitalization; and the complete halting of hospital construction plans. This organization is fighting the good fight for the whole country, for the very financial stability of the nation, because taxes even now are so burdensome that hundreds of thousands of property owners have defaulted. What will it be when new taxes are needed not only to balance the budget but to meet the new raids on the treasury contemplated by the politicians who in many instances are utilizing the veterans for selfish aggrandizement?

¹ Concerning the National Economy League, see California and Western Medicine, December, 1932, page 425.

ACTION OF THE SAN DIEGO COUNTY SOCIETY

The San Diego County Medical Society, of which the writer of this article is secretary, fully realizes the principles embodied in this battle, and believes that now is the time to organize and make articulate the entire profession and the taxpaying public in order that the problem may be solved immediately and rightly. To this end the society is throwing its support behind the National Economy League, whose leaders embrace such distinguished figures as Newton D. Baker, Elihu Root, Alfred E. Smith, General John J. Pershing, Rear Admiral Richard Byrd, and Admiral Sims. To do otherwise is to court financial disaster for the country and the erection eventually of a real trust in state medicine, as opposed to the private practitioner and hospital. May I suggest a vigorous course of action by every medical society?²

233 A Street.

DOCTORS AND CLINICS

By C. L. MULFINGER, M. D.
Los Angeles

DURING the past two years economic aspects of the practice of medicine have received more attention in public discussion than at any time within the knowledge of the present generation. Various surveys have been undertaken—local, state, national, and even international—with a view of arriving at an accurate estimate of the costs of medical care. In these surveys special attention was paid to the remuneration received by the physician and to the cost of hospitalization and accessory expense to the patient. One thing, however, has been overlooked in these surveys, and that is, the amount of gratuitous services rendered by the medical profession. The briefly published reports of tax-supported institutions are much in evidence in these surveys, but little information is given about the numerous clinics which are privately supported and have staffs of devoted attending physicians who give freely and without public recognition of both their time and service to the care of indigent and near-indigent citizens.

PURPOSE OF THIS PAPER

This article may be regarded as an attempt to show briefly the amount of charity work done by attending physicians in seven of these privately supported clinics in the Los Angeles metropolitan area, especially pointing out the mounting figures of the last three years. For the purpose of making the report on this question reliable, a brief questionnaire was sent out to the ten largest privately conducted clinics in the Los Angeles area. Of

² The Southern California branch of the National Economy League has just been organized, with headquarters at 548 South Spring Street, Los Angeles. Membership enrollments may be sent to that address or by telephone, Mutual 2289. Membership is without obligation, the organization being supported by voluntary contributions. Its purpose is to fight extravagance in all phases of local, state, and federal government. The matter discussed above is only one of its efforts. Additional facts and figures may be found in the American Medical Association Bulletin of November 1932, pages 199 ff., being abstracts from General Frank T. Hines' address, "The Major Problems of Veteran Relief." See also December, 1932, California and Western Medicine, page 425.

these, seven answered the four brief questions which were submitted to them.¹ These questions were:

1. How many patient visits per year have you had in your clinics for the past three years?
2. How many doctor hours per year for the past three years?
3. Has the social status of your patients changed noticeably in the past three years?
4. What is the average charge per patient made?

The answers received were as follows:

I. CLINIC PATIENT VISITS			
	1929-30	1930-31	9 months only 1931-32
Clinic No. 1..	51,932	57,166	70,224
Clinic No. 2..	2,399	8,250	8,513
Clinic No. 3..	10,357	12,694	16,453
Clinic No. 4..	34,104	35,964	43,844
Clinic No. 5..	23,225	23,225	23,225
Clinic No. 6..	26,815	28,628	30,898
Clinic No. 7..	71,123	90,946	115,000 estim.
	219,961	256,873	308,157

II. DOCTOR HOURS			
	1929-30	1930-31	1931-32
Clinic No. 1..	7,616	7,616	7,616
Clinic No. 2..	No record		
Clinic No. 3..	No record	1,617 (ten mos.)	3,147
Clinic No. 4..	6,097	6,097	6,097
Clinic No. 5..	3,612	3,612	3,612
Clinic No. 6..	2,989	3,910	5,503
Clinic No. 7..	10,812	10,812	15,812 estim.
	31,126	33,664	41,787

These figures show an increase of clinic patient visits of 50 per cent in 1931-1932 over 1929-1930. For this increase in patient visits at the clinic there has been a corresponding increase in the number of doctor hours which amounted to almost 33 per cent.

MONEY VALUE OF THE SERVICES DONATED
BY PHYSICIANS

Several years ago the Fee Schedule Committee of the Los Angeles County Medical Association estimated that the doctor's hour should be worth \$12 to the patient. This was considered a conservative estimate. Taking this as a basis of calculation, it would follow that, in the seven clinics whose reports were submitted, the physicians rendered \$501,447 worth of service to the general public in 1932; and if all the free or part free clinics in this area were included in our report there is no doubt that the sum of the service rendered gratis would mount up to \$1,000,000 for the current year.

The lay public knows nothing of this service nor reads a public record of it. If some philanthropist or philanthropic organization were to give

¹ A questionnaire survey of some Los Angeles clinics. The clinics whose social departments and directors have furnished the writer with the above facts are: All Nations, White Memorial Hospital Clinic, Santa Rita, Children's Hospital Clinic, Pasadena Hospital Dispensary, Orthopedic Hospital Clinic, and Eye and Ear Hospital Clinic. For their kindness and helpfulness the author wishes to express his gratitude. All these clinics are members of the Los Angeles Community Chest, with the exception of the Pasadena Hospital Dispensary, which is a member of the Pasadena Community Chest.

that much money to public charity, there would be ample display of striking headlines for the eye of the common man for weeks. There should be, therefore, no criticism of the Committee on the Costs of Medical Care when they suggested that physicians should be paid for services rendered to the indigent in each community. Directors of the clinics have made an approximate estimate that the physicians of the attending staff have each given up two weeks of time annually to serve the patients in their clinics.

COMMENT

It is the consensus of opinion among social workers and directors of philanthropic institutions that the social status of the patients seeking medical care in clinics has undergone a marked change within the past two years. One person who is directing an out-patient department in one of the local clinics has recently said: "In 1931-1932 we have noted fewer foreigners in our clinic. In their place we have 75 per cent of American laborers, men of the skilled labor class, such as carpenters, plumbers, auto mechanics, dependents of clerks, actors, musicians, etc." This statement bears out the truth of the experience of the social workers who gave the answer to question three in this report.

In the matter of clinic fees, the average charge is twenty-five cents for the first registration, and ten cents for each following visit. A minimum charge is made for x-rays, for laboratory work and for special dressings to those who can afford to pay. The cost of the average patient per visit to the clinic, where such estimates have been made, is from \$1.09 to \$1.79, which is considerably cheaper than the cost per patient visit in the out-patient department of tax-supported institutions.

To resume our conclusions once more, an enormous amount of medical and surgical work is being done gratuitously by the attending staffs of the nontax-supported clinics and out-patient departments of the Los Angeles area. Such work has received little or no public recognition in the lay press and was not considered in surveys of the costs of medical care.

It is questionable whether the medical profession will be able, in the face of the present economic trend, to give so full-heartedly as it has in the past of its time and support to these institutions without some form of pecuniary reward.

2014 Seventh Street.

ETIOLOGY OF INGUINAL HERNIAE

By PHILIP STEPHENS, M. D.
Los Angeles

DISCUSSION by W. W. Roblee, M. D., *Riverside*; Gunther W. Nagel, M. D., *San Francisco*; C. Lewis Gaulden, M. D., *Los Angeles*.

THE average patient coming into an office today for examination and advice wants to know the reason for his disease or disability, and the average consultant attempts to explain, or to set forth, a reason for the existing condition. In

so doing, it appears that he is either careless or neglects to make the proper distinction between cause and effect. Especially is this true in the discussion of herniae with our patients in general and its influence upon the public, lay and legal in particular. There is at present such a marked confusion of ideas regarding the causes of herniae even among the rank and file of our own profession that it is little wonder that legal boards, judges, insurance companies, and compensation commissions have so many opinions and varied rulings, all more or less confusing and conflicting in the interpretation thereof. We are continually being asked by the various interested state and legal bodies for our opinions and should, without hesitation, freely express ourselves. Unfortunately some of us do not, and in view of this fact, I am finding my excuse for briefly reviewing the subject.

COMPARATIVE ANATOMY

It is easy to assume that hernia has always existed in man, and we are told that biologically it is the direct result of his assumption of the erect posture. In all vertebrates, except man, the chief support of the abdominal contents is the upper abdomen, the lower abdominal wall having within it the inguinal rings, so with the added gravitation and the necessary openings, the fact that man (due to his erect posture) is the only sufferer from hernia is easily accounted for. It is said that hernia almost never occurs in the four-footed animals in spite of the fact that many of them have open processus vaginalis peritoneae. We are also taught that as a result of our assuming the upright posture, there is quite a difference not only in the arrangement of the abdominal contents, but a marked lengthening of the mesenteric attachment, permitting the descent of the intestine through the inguinal canal. In animals the mesentery is given off at a right angle to the spine or posterior parietes; in man it descends almost parallel thereto.

Inasmuch as approximately 90 per cent of all herniae are inguinal (although the increase of postoperative hernia has somewhat lowered this figure to 82.3 per cent) we will, in a measure, confine our discussion to this particular type, namely, inguinal herniae.

ANATOMY

A brief review of the anatomy of the sac, the canal and the contiguous structures is at this point necessary, along with something of embryologic physiology. The persistence of the patent funicular process in the male and the canal of Nuck in the female provides the potential hernial sac an escape of the viscera downward, into and through the rings. If we accept this congenital or sacular theory (and it is accepted generally) it is interesting to know that in the male the funicular process is larger and longer, and both rings—internal and external—in the entire inguinal canal are much larger, owing to the size, descent, and ultimate destination of the descending testicle in late embryonic life. After birth the increasing size, weight and mobility of the gravitated testes exert

a definite drag on the process in an outward direction, tending to definitely enlarge and elongate it. In the female the process, even though patent in the canal of Nuck, is adherent to the round ligaments and subject to backward pull by the weight of the uterus.

An abdominal wall, then, with a definite well lubricated canal (open funicular sac) leading from the abdomen to the scrotum, small as it may be and no matter how well guarded by muscular structures and by highly organized reflex nervous mechanism, is a potential hernia and might be compared to a well-constructed dam with a small canal, or fault, through which water trickles, which erodes and as time goes on, through necessary pressure from within, gradually enlarges, so that finally (and usually when there is a sudden surge or increase in this pressure) there is an actual break. And, obviously, the cause for the break is not due to the pressure the dam was unable to withstand, but to the original fault at the beginning of the structure built to withstand this calculated normal pressure.

One of our medico-legal boards of an adjoining state ruled as follows: "Medical science teaches now what it has taught for the past twenty years and is now accepted as a medical scientific truth and corroborated as such by the foremost surgeons and anatomists of the world, that is, that hernia, or so-called rupture, is a disease ordinarily developed gradually and is very rarely the result of an accident."

THE DEVELOPMENT OF AN INGUINAL HERNIA

A true traumatic hernia, or one that results from, or is actually caused by one single act of trauma, is extremely rare and a curiosity, and must be the result of direct or cutting violence and not the result of strain or muscular effort. That a rupture, or sudden descent of part of the abdominal viscera, may appear more or less suddenly and due to, or contributed to, by intra-abdominal pressure or strain, we are willing to admit, that is, if the canal is so faultily equipped anatomically and there has been a period of preparation through the usual continuous and long-applied impulses of intra-abdominal force. That herniae appear most often in the laboring man subjecting himself to daily strain is not surprising, especially if we find this individual with a poor muscular support in the lower abdominal quadrants. Certain positions in exercise and labor predispose to the rather sudden appearance of the tell-tale tumor at the external abdominal opening, or within the canal. In going over a number of cases in which we have personally taken the histories, we are impressed with the fact that position is quite a definite factor when associated with strain. A strenuous pull, or push, with the feet and legs widely spread apart—the same effort with one foot on the ground, the other placed higher up and braced against a wall—clinging to a pole or braced in a tree with the thighs well apart and the body in a strained, twisted or awkward position while attempting to disentangle wire

or line—have all been noted in my histories. In attempting to determine whether my observation of this position and its frequent appearance in my histories has any actual anatomical and physical bearing on the case, I find that the theory advanced by Keith in his so-called "Shutter theory," is fairly applicable.

While we are willing to admit that a preformed sac is not a hernia, the protrusion of the viscera into the sac predisposes to its formation, and it is some form of intra-abdominal pressure in the form of repeated strain which finally forces the viscera into the sac. Keith seems to reject the sacular theory and offers an explanation of the actual protrusion as the result of a strain. He describes the contractile, conjoined group of muscles of the lower abdomen as acting under reflex nervous mechanism against the Poupart's ligament in the manner of an inguinal "shutter" which serves to close the area of actual or potential weakness. Failure of the shutter to act quickly during abdominal strain may permit the hernial start or actual protrusion. In my opinion, this is augmented by the position of extreme abduction of the thighs, that being the position in which the shutter effect of the support of the lower abdominal quadrants is least effective.

Much depends also upon the character and length of the patent processus vaginalis when we consider the length of time necessary for the hernial development—the size of the hernia and the distance of its descent toward the scrotal sac. A short, small sac in a well-muscle individual will develop a small bubonocoele, where the large, long type admits of more viscera and descends eventually to the scrotum. This process, however, is of necessity slower and is the result of a long period of simple strains incident to daily life. The incipient hernia gradually extends obliquely downward, enlarging, lengthening and thickening the sac into which more viscera is being crowded.

Coley-Mock and a group composed of representative surgeons and anatomists, all maintain that a hernia actually exists at birth and requires years to develop and is actually a congenital condition—never the result of a single increase of abdominal pressure. They justly contend that the so-called hernia of effort, due to long and continuous physical strain, always occurs in the congenitally deficient abdominal support.

RELATION TO INDUSTRIAL ACCIDENT RESPONSIBILITY

The surgeon or the practitioner who is consulted by a patient regarding a hernia should give the patient and himself the satisfaction of eliciting and recording an accurate, intelligent, and honest history as to its occurrence. Too often the history consists of, "I lifted something, or at least I must have lifted something several days ago and this morning—or last Saturday night when bathing—I noticed a lump." Later, when medico-legal complications arise, this history is added to and extracted from until the story fits the "one act of trauma" as described, the bolstered-up history

saddles the responsibility for hospitalization, surgeon's fees, and indemnity on some responsible financial agent and all is smooth. The surgeon knowing, or at least feeling, that he is not altogether guiltless, salves his conscience by thinking that he has given the poor working man the benefit of the doubt. The responsible party, or employer, is content to be able to unload the responsibility onto the insurance carrier feeling that he has paid for just this relief, and the carrier realizes that (in spite of the many wise, just, and scientific opinions which he has introduced as evidence) he is called upon to shoulder the expenses involved and assume the entire responsibility.

We will all agree that a traumatic hernia is extremely rare, usually occurring by direct violence and with definite tissue destruction, and that it may always be accepted as accidental without question.

THE OCCUPATIONAL HERNIA

The so-called effort, or occupational hernia, is the type which is always in medico-legal controversy and, as regards this condition, we should take a definite stand in the way of education of the lay bodies.

If the employer is to be made responsible for the herniae developing in his employees during the course of their employment, he should demand a physical examination before employment. In the larger corporations this is done; consequently when a hernia does occur during the period of their employment the cost involved in its care is accepted without demur. As a consequence, the smaller concerns which do not have, or cannot afford a physical examination for employees, get the "lame ducks" or rejections from the large corporations and the burden is placed where it least should be borne.

The whole problem as to the ordinary, indirect hernia might be properly settled by our industrial accident commissions accepting all as accidental, or accepting none which, from the standpoint of economy and legal controversy, would at least be a benefit or improvement over the present status of the question.

We thoroughly concur in the conclusions of Coley, Leigh, Walker, Hopkins, and Hutchison in their American Railway Association investigation and report on the subject. Their report ends with the following:

"What, then, is the remedy? The only thing needed to bring about greater harmony in the procedure of industrial commissions is to spread broadcast a clearer knowledge of the well-known medical and surgical facts relating to the etiology of hernia. We must recognize that medical and surgical truths permeate but slowly, especially when they have to overcome long established traditions too often supported by court decisions. The first is to convince the commissions and the courts of the well-established surgical fact that hernia is a disease and not the result of an accident. When this has been done a radical review of the present state laws regarding compensation in cases of industrial hernia will be forthcoming.

RECOMMENDATIONS

1. Render proper compensation for all cases of true traumatic hernia due to direct violence.

2. Make a physical examination of all applicants for positions in industry, no matter in what capacity. Such examinations will determine the fact whether or not a hernia was present at the time of examination.

3. Any case of hernia developing in the course of duty, incident to the man's daily work, should be treated as a disease due to special anatomical weakness on the part of the individual, for which the company is in no way responsible. If it is considered wise under certain circumstances to recognize any moral responsibility, let it be on an economic or humane basis. This moral obligation should be understood to be strictly limited to such employees who had been found apparently free from hernia at the time of previous physical examination.

1136 West Sixth Street.

DISCUSSION

W. W. ROBLEE, M. D. (Glenwood Building, Riverside).—When the responsibility for disability due to industrial injuries is placed upon the employer or his insurance carrier the decision as to just what constitutes an injury becomes a pertinent and often a controversial point. This has been especially the case in regard to abdominal herniae. The insurance carriers soon learned of such opinions as that expressed by Coley-Mock, as quoted in this paper, to the effect that hernia always occurs in the congenitally deficient abdominal support, and for that reason they refused responsibility in all cases except those associated with direct trauma. The ailing employee, on the other hand, could frequently point to many years of activity in his employment with no pain, lump, or, at least to his untrained senses, to any other evidence of hernial protrusion, until at a certain day and hour while at work he felt something give in the groin and a sensitive palpable lump became evident. As pointed out by Doctor Stephens, many preëxistent herniae were twisted by a distorted history into the traumatic class and, on the other hand, meritorious cases were refused treatment.

The embryologic, anatomic, and physiologic facts brought out in this paper, and the resultant conclusions of the essayist, cannot be questioned, but the practical question remains as to what decision shall be made as to responsibility in these cases. In my opinion, the intent of the Industrial Accident law is that every disability in industry caused by accident shall be cared for by the industry and the man be returned to it as fit as before the accident or suitably compensated therefor. There are many of these border line or controversial conditions; for example, hernia, hyperthyroidism, neurosis, etc. There will continue to be this honest difference of opinion in regard to responsibility in these cases until provision is made for physical examination prior to employment. If physical disability is found the workman should then either be refused employment or disability waived on that point. Having been employed the workman should then be protected by a most liberal interpretation in these border-line cases.



GUNTHER W. NAGEL, M. D. (2000 Van Ness Avenue, San Francisco).—It is generally recognized that the majority, if not all, herniae are congenital in origin. It is probably often true that a man may first discover the presence of a hernia following some unusual muscular effort, just as a woman may discover a lump in her breast following a blow. It is not a simple question of cause and effect, as assumed by the patient, but the discovery of a preëxisting condition as a result of attention having been called to the part.

I agree with Doctor Stephens that we should be much more strict in our diagnosis of hernia due to

industrial injury. A lot of false notions regarding hernia have spread among employees of industrial concerns and these must be corrected by statements of the underlying cause of hernia and just decisions on the part of surgeons and of industrial referees.



C. LEWIS GAULDEN, M. D. (326 Rivcs-Strong Building, Los Angeles).—Since the advent of the Workmen's Compensation Act the cause of inguinal hernia has ever been a topic of discussion. The pendulum swings first one way and then another. This should not be the case, as anatomy and pathology remain the same and do not change as do politics or religion. The term "rupture" is a misnomer and should be discarded.

Oblique inguinal hernia is due primarily to a congenital defect, and is not caused by any one act of violence, and comes on gradually. The defect is present, and anything that increases intra-abdominal pressure will tend to force abdominal contents into the waiting receptacle. Suppose, for instance, that it required one hundred acts of increased intra-abdominal tension to force a small amount of omentum into a preformed hernial sac; suppose, further, that ninety-nine of these acts consisted of coughing, sneezing, or straining at stool, and the hundredth act was due to lifting. Should the hundredth act be said to have caused the hernia? Absolutely not!

Section 3, Subsection 4, of the Workmen's Compensation Act states in part as follows:

"In case of aggravation of any disease existing prior to such injury, compensation shall be allowed only for such proportion of disability due to the aggravation of such prior disease as may reasonably be attributed to the injury."

It is only into this category that oblique inguinal hernia could possibly fit. How can one cure an aggravation of a hernia without curing the hernia itself?

I do not attach great importance to a medical examination for ruling out a hernia or the predisposition to the same. A small oblique hernia may be present at one time and absent another. No one can diagnose an empty preformed hernial sac. The proportion of hernias showing up in employees examined does not differ greatly from those unexamined. Of course the large complete hernias could be excluded by examination, but aside from this nothing is to be gained.

THE DOCTOR OF TOMORROW*

By A. GATEWOOD, M. D.
Chicago, Illinois

IN order to limit my remarks, I think it would be well to define my subject, "The Doctor of Tomorrow." According to Webster, a doctor is one skilled in a profession or in some branch of knowledge. Naturally, by *doctor*, I mean not those skilled in the practice of "pathies," of which I understand you have so many, but one skilled in *medicine*. And *medicine*, as Vaughn has so well put it, "consists of the application of scientific discoveries to the prevention and cure of disease. All else which may go under the name of medicine is sham and fraud." . . .

In order to learn what my colleagues thought of the doctor of tomorrow, I asked several of them in my best Socratic fashion, "Do you want your boy to study medicine?" Dr. K. answered

in his typical brusque fashion, "Not if I advise him. I don't want my boy to slave as I have done the past forty years. I'm going to make a banker of my boy."

Dr. P. unhesitatingly replied, "What! and starve to death? Doctors of the next generation will be paid a mere pittance by the state. All ambition will be stifled. I should say not!"

Dr. O. answered, "Yes, it's in our family blood and I'd like to see him carry on if he is so inclined. I think medicine has a great future. I envy him the opportunities of tomorrow."

And so at once it became evident to me that there are so many phases to the subject that I dared inquire no further. The economic future seems to be the one most discussed, judged by the comments of the medical journals, the heated discussions in current magazines and the daily press. I would like to pass over this phase with one suggestion. If some of the well-meaning philanthropists and legislators would cease their troublesome meddling into medical economics and establish a few foundations for the more adequate remuneration of the hard-working physician or a pension fund for the doctor incapacitated in line of duty, as they say in the army, instead of devoting the funds to the care of broken-down cats or what have you, the medical profession would work out a sane solution of its problems.

Medicine has made more progress during the past fifty years than in its entire preceding history, due to mechanical aids to our five God-given senses. We probably are no better philosophers than Plato or Pythagoras. Our ability to reason is not superior to that of Archimedes or Hippocrates or Harvey. But Augenburger and Laennec have put tools into our hands which make it possible to explore the field invisible, while the modern sciences of physics and chemistry have opened the way to the ultimate solutions of the problems of bacterial disease, degenerative processes, neoplastic disease, senescence, and even of death itself.

The other day the Nobel prize was awarded to Warburg for the demonstration of the fact that a tumor cell generates more heat than a similar normal cell. Imagine, then, a process so delicate that one could place an instrument on the calvarium and say with precision, "Not a brain cell working," or "The patient in question has an early cerebellopontine angle tumor which can be successfully irradiated without the crude methods of our so-called refined surgery." The surface of scientific medicine has barely been scratched. It has been said that we are approaching the end of an era of the most rapid development the world has ever known. If that be so, we are entering a period in which the tools and methods for undreamed of progress are thrust into our hands with the injunction to "carry on."

I agree with Dr. O. The future of medicine was never brighter than today. The medical student as I see him in my classes is often wiser than the teacher. Few men on faculties are as well grounded in the fundamental contributory sciences as their students. It is more important than ever before that teachers and pupils should

* Abstract of some remarks made before the International Medical Club of Southern California, November 20, 1931.

* From the department of clinical surgery, Rush Medical College of the University of Chicago.

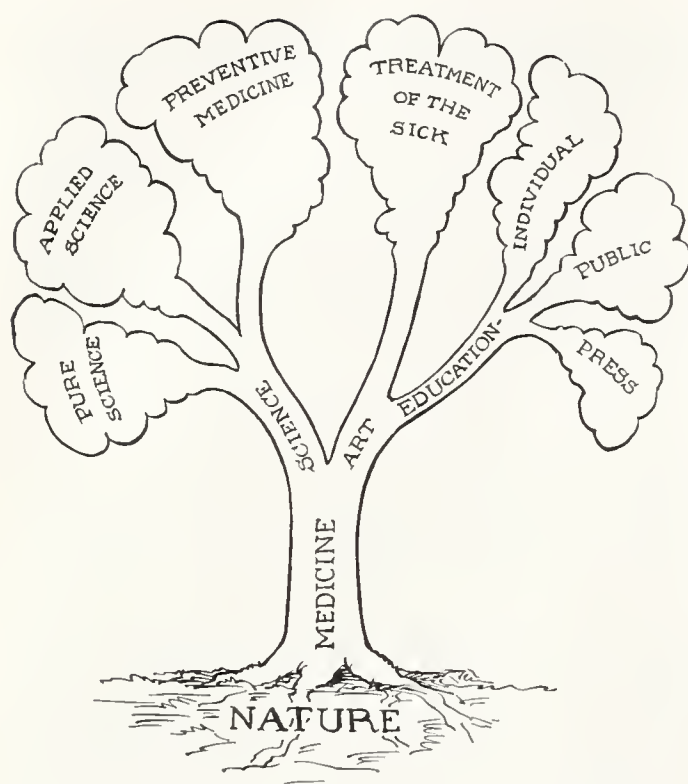


Fig. 1.—Tree showing source and outgrowths of the art and science of medicine.

regard themselves as overlapping. These students, our doctors of tomorrow, are possessed of an alertness equal to that of any of their predecessors, plus the advantages of a scientific age. In addition, they have been freed from the fetters of outworn theories. It is our duty to keep them free.

"How happy is he born and taught,
That serveth not another's will—
Whose armour is his honest thought,
And simple truth his utmost skill."

Like Elliot's octogenarian who read eight hours a day for seventy years, all to no purpose, it behooves us to direct the energies of our future doctors. The increasing complexities of modern life, the specialization in and out of medicine are bound to have their influences, but the industrial revolution through which we are passing cannot completely dissociate the art from the science of medicine. 'Tis true both spring from the same source, *Nature* (Fig. 1), and while they have many similarities, the likenesses in mental processes are at a variance too often overlooked in our present-day diagnostic and therapeutic methods. The art of medicine, which was dominant until about 1875, produced the doctor "who may have been awkward in handling test tubes but he was adept in handling patients." Due to the development of bacteriology and the application of modern physics and chemistry, scientific medicine has made more progress in the past fifty years than it had in the preceding fifty centuries, but too often it has failed to remember the age-old differences between mind and matter.

I have already said that both the art and the science of medicine spring from a single trunk. Today, however, medicine has grown into many branches no one of which may be lopped off. The art of handling the sick mind (and what mentality

is not disturbed by even the slightest physical ailment) will assume its proper importance. Perhaps of no less importance will be the education of the public mind. Next to the scientific, the most outstanding trend of our age has been the democratic. The hope of democracy is in leadership. We look for such leaders in education, law, and business. We must have them in medicine. The public distrust of doctors, bred by ignorance, superstition and mysticism will vanish in the light of intelligent general medical education. No cult or *ism* can long thrive in the atmosphere of open competition with widespread dissemination of medical truths. The transformation of the attitude toward doctors from that of expert in emergency to that of exponent of prevention, is another important step in the education of the public mind.

I can only indicate some of the branches of the science of medicine along which our doctor of tomorrow may climb. The great majority of these men will carry on the altruistic ideals which are the intrinsic purposes of medicine, the alleviation of suffering and the prevention of disease. They might be compared to bridge-builders or construction engineers. There will also be a small group who will be interested in pure research, and whose scientific medicine might be likened to the study of physics as contrasted with the practice of engineering. These pure scientists may continue their cloistered existence, delving into the biological sciences for hidden bits of technical knowledge. The larger group, practicing applied scientific methods, will be no less investigators. Much remains to be learned in the field of applied therapy.

The third branch of the scientific limb of my medical tree is preventive medicine. When we consider how many diseases have been conquered before their actual etiological factor was even suspected, it is apparent that much still remains in this field. It seems to me, therefore, that specialization has widened our horizon rather than narrowed it, and I believe there is ample room for our doctor of tomorrow.

In conclusion, then, my conception of the doctor of tomorrow is:

First, that he will be better trained than the doctor of today in biologic sciences and in human understanding.

Second, that he will be an intelligent skeptic, always eager to dissociate scientific facts from moss-covered theories. By this I do not mean that he should not have imagination. Instead, freed of the handicap of fixed ideas, he can develop his imaginative reactions along scientific lines.

Third, with the rich heritage of the past, he will develop into a leader in the pursuit of the intrinsic purposes of medicine, the relief of suffering, and the prevention of disease.

Yes, I agree with Dr. O., the doctor of tomorrow has a glorious future.

"Not in vain the distance beckons,
Forward, forward, let us range—
Let the great world spin forever
Down the ringing grooves of change."

122 South Michigan Avenue.

THE LURE OF MEDICAL HISTORY*

HIERONYMUS FABRICIUS AB
AQUAPENDENTE†

By S. L. MILLARD ROSENBERG, Ph. D.
University of California at Los Angeles

For out of olde felde, as men seith,
Cometh al this new corn fro yere to yere;
And out of olde bokes, in good feith,
Cometh al this new science that men lere.
—CHAUCER.

I

WHEN Adam's spare rib, the vertebra "Luz" (so valuable at the Resurrection), and other scholastic bones were live topics of early sixteenth century medicine, along came young Doctor Vesalius, prosector of the University of Padua, and scornfully swept them aside. The typical instructor of that day, in long robe and biretta, wand in hand, seated in his pulpit-chair, had been expounding Galen by the book while below him the barber made a dutiful attempt to demonstrate the viscera of the subject before him. Vesalius changed all that, substituting first-hand knowledge, recognition of palpable tissues by educated touch,

† Editor's Note.—The volume under discussion was one of a collection of rare medical books acquired years ago by Professor Rosenberg. The British Museum has a copy of this work, but the present volume contains some illustrations in seemingly better preservation than those in the British Museum folio. Doctor Singer of the University of London was particularly interested in the illustrations of the vein valves. The copy here discussed came into the possession of the editor of California and Western Medicine through Professor Rosenberg. It may add to the interest of this paper to quote from a letter of September 9, 1925, to the editor, in which Professor Rosenberg tells how he himself came to be the owner of the volume. Professor Rosenberg wrote as follows:

"In answer to your inquiry of last week:
"In the early summer of 1906, as Traveling Fellow of the Alliance Française of the United States and the University of Pennsylvania (I had won a prize in Old French, which was the Fellowship in question), I spent a couple of months in Ravenna, partly for sentimental reasons, partly because I felt that I might pursue there my Italian studies with greater profit, since the chance (or danger) of hearing much English there seemed somewhat remote. To further my quest still more, I decided to stop at the home of a school teacher, a man unfamiliar with any but his native tongue and, from now on, I was certain to hear the vernacular only. My host was an intelligent chap, however, and fond of old books in particular. One day he showed me a little library of early sixteenth and seventeenth century medical books he had recently obtained at public auction at Naples, where the effects of a physician who had died lately were thus disposed of. Of course, he had acquired them "for a song," so to speak. Practically all of them were quaintly printed and illustrated books on anatomy, or of particular diseases—all printed in Latin—the Fabricius among them. If ever I regretted being a poor student, it was at that time, for the teacher who, like all of us, was not particularly blessed in the way of things material, was not averse to selling his treasure at a price. He had an idea, to be sure, of the rarity of these books, but no real conception of their actual value. I was able, however, to secure about half of the collection, among which, I think, the particular gem was an early sixteenth century contemporary account of a plague of lues in Naples, spread among the populace by French troops (if my memory serves me right). That book—representing a type of the earliest printing and the queerest sort of illustrations—I hesitated to carry along on my travels, since I was yet to remain some fifteen months abroad, and I decided to mail it, registered, to my home in Philadelphia. It never reached its destination in spite of registration; it was lost, or stolen, in transit. The rest of the books—with the exception of the Fabricius, which again on account of the illustrations I was loath to dispose of—I distributed among my medical friends in the course of these twenty years.

*A Twenty-five Years Ago column, made up of excerpts from the official journal of the California Medical Association of twenty-five years ago, is printed in each issue of California and Western Medicine. The column is one of the regular features of the Miscellany Department of California and Western Medicine, and its page number will be found on the front cover index.



Fig. 1.—Reproduction of an engraving of the best known likeness of Hieronymus Fabricius of Aquapendente (1537-1619), who received his surname from the Italian city, Acquapendente, where he was born—a custom of that period which we recognize in such famous names as Leonardo da Vinci and Antonio Allegri da Correggio. The following is a translation of the inscription below the portrait:

Martial Rome doth vaunt Fabricius' name;
Thou, Aquapendente, gavest Fabricius birth.
The noble line thou to Fabricius, illustrious Rome,
hast given;
And he in turn hath Aquapendente ennobled.

practice of dissection *in situ*. Medicine thereupon turned away from Galen, and modern anatomy began. What an uproar there was, though, when in 1543 Vesalius published his *De Fabrica Humani Corporis*! He was but twenty-eight years old. Sylvius, his old teacher at Paris, turned against his brilliant pupil with coarse abuse; his own pupil, Columbus, derided him; some joined a conspiracy of silence; others, at the hint of the authorities, spread covert detraction. Open attack Vesalius sturdily met, but against stealth he had no weapon, and in a fit of anger he flounced out of Padua and went to Spain to accept a lucrative post as physician to the Emperor Charles V, who was eating and drinking himself to death. What fate might have befallen Vesalius if he had not left Padua, given up research and renounced anatomy, may be inferred from the fate of Dr. Miguel Servet, called Servetus, the great Spanish surgeon who discovered the heretical passage of the blood through the heart after mixing with



Fig. 2.—Frontispiece of *De Formato Foetu*. Translation: Hieronymus Fabricius of Aquapendente on The Formation of the Fetus Venice

[Published] by Franciscus Bolsetta 1600

Jacob Valegius, engraver. With privilege [license to print].

The book is divided into ten chapters, dealing, in the order named, with the veins and the umbilical arteries, the fleshy substance, the cotyledones, the chorion membrane, the allantois, the urachus, the amnion, the fibrous ligaments, and the internal parts to be noted in the fetus.

air in the lungs, and recorded the fact in his *Restitutio Christianismi* along with some theology which an unbalanced Frenchman by the name of Jean Calvin quibbled into a heresy sufficient to deserve the stake, at which he gleefully burned Servetus and his book.

At Padua, meanwhile, the ideas of Vesalius were being sustained by his pupil Fallopius, who expounded the new doctrine with vigor but with a tact that saved him from serious assault. At Rome, however, another brilliant discoverer, Eustachius, opposed Vesalius; for though Vesalius was personally out of the controversy, his great book *De Fabrica* was still dealing roughly with the old superstitions. It is not strange that so clever a man as Eustachius did not see the merit of the New Anatomy; such blindness is now and then illustrated in the profession today, though less strikingly.

Fallopius, while bravely upholding his former master, was in his turn blessed with a devoted pupil, Geronimo Fabrizio—later to be Latinized as Hieronymus Fabricius—a native of Aquapen-

dente, a little town in the Appennines. Let us glance at some of the startling events that occurred while he was still a boy, born in 1537. One of these was the hullabaloo over Vesalius and his *De Fabrica*. Fabricius was then six years old.

By a curious coincidence, it was in the same year of 1543, and in the same week of May, that the mighty Copernican heresy was published, in *De Revolutionibus Orbium Coelestium*, wherein Copernicus described the revolution of the planets around the sun. Thus, within seven days of each other, Galen and Ptolemy became back numbers, and both medicine and astronomy began a new chapter. Copernicus fared better, personally, than perhaps any other dangerous heretic, for he did not live to hear any scientific criticism of *De Revolutionibus*, let alone hear the thunder of the Church. He was on his death bed when his book came from the press, and it is pleasant to believe the story that the first copy was placed in his hands while he was still in command of his faculties. Blessed by the consciousness of success, he breathed his last a few hours later, dying of intestinal infection and not Pro Hæretico Comburendo.

What else happened in astronomy is another story, but those were certainly great days in medicine, particularly anatomy and surgery. Closely following the *De Fabrica Humani Corporis* of Vesalius came, in 1545, the epoch-making work of Ambroise Paré, a French army surgeon, whose name should be blessed by every wounded soldier and civilian. Paré stopped the use of boiling oil as a dressing, and abated many other terrific practices which he had abundantly witnessed during his long service in the armies of King Francis I, the implacable foe of Charles V, whom Vesalius at that time was trying to save from a more formidable enemy, gluttony. Paré's methods are set forth in that great work, *Treatment of wounds made by arquebuses and other firearms and also by gunpowder burns*, an important contribution to surgery but only one of the many we owe to Paré, including his *Epitome* of the *Fabrica* of Vesalius, which made the work accessible to all surgeons.

A year later, in 1546, appeared Fracastoro's *De Contagione*, in which the modern theory of infection by microorganisms is stated with wonderful clairvoyance.† In short, medical advance was rapid in the middle of the sixteenth century, in spite of stiff opposition by State and Church and from within the profession itself. Medicine had not long been regarded as a profession, at least a respectable one, as shown in a decree of Charles V in 1548 in which surgery is declared to be honorable. This may have meant much to average medical men, but the real researchers had not waited to be told they were no longer outcasts from good society in the Holy Roman Empire; they had gone right on as if Charles were merely King of Castile. And they went on rapidly. We can glance but hurriedly at a few items.

† Compare, also, "Two Sixteenth Century Doctors on Syphilis and Guaiacum—Fracastoro and Ferri," by S. L. Millard Rosenberg, in *California and Western Medicine*, Vol. XXXV, No. 5, November, 1931.

ILLVSTRISSIMO
ET EXCELLENTISSIMO
RENATO BORROMAEO,
ARONAE COMITI. MILITVM
CATAPHRACTORVM DVCI.
Excellſique Conſilij ſecretoris Conſiliario pro Regia
Catholica Maieſtate in ſtatu Mediolanenſi.

Hieronymus Fabricius ab Aqua-
pendente. S. P. D.

A MELITVDINI veſtra in hiſce meiſ tabulis, Comes Il-
luſtriſſime & Excellentiſſime, aduentitiam illam cœ-
nam non offero, Aulo Vitellio nono Romanorum Im-
peratoris a ſatre paratam: quorum antiquiſſimam ſa-
miliam etiamnum refero, atq; ducis, longa quidem ſe-
rie, at certe vera, & hiſtoricis confirmata teſtimonijs,
ſed cognomine Vitellianorum in Borromæos, ſub annum 1439, per adop-
tionē mutato. Non offero inquit cœnā illā celeberrimā, in qua teſſe Suetonio
in vita Vitellij, duo millia leuſſimorum piſcium, ſeptem uero auium
appoſita traduntur. Præter quæ ſcarorum iocinora, ſaſanorum & pau-
num cerebella, linguas phœnicopterum, murenarum lactes a Parthia of-
que fretoque Hiſpania per nauarchos & triremas petitarum, frater Im-
peratoris chariſſimus miſiſeruat. Humana uita principia et rudimen-
ta offero. Nec tantum humana, ſed & plerorumq; animalium, eorum
ſaltem quæ a communium aliorum ratione diſcrepant. Quo quid præcla-
rius, quid magis abſtruſum, quid mirabilius dici aut excogitari poteſt?
Neronem ipſum Imperatorem ſeruus (huius forte rei admiratione captus)
matris mortuæ cadaver inſpicere, & pyramm illud hominis domiciliū,
a quo ipſe prodieſſet, contemplari uoluſſe. Nec mirum, ſi quid enim eſt
in tota natura induſtrum, ſi quid prouident, ſi quod elegans, hoc omnia
uno in ſectu eſſormando, nutricando, et conſequendo collocante, uidetur
nature parens Deus. Unde in hac erumpit Prophetia: Celebrabo te De-
mine quia mirabiliter ſum formatus. Naſcitur tenellulus & delicatulus
embrio.

Fig. 3.—Translation of the first page of the Dedication of *De Formato Foetu*: To the most illustrious and excellent Renatus Borromæus, Count of Arona, Commander of the armored soldiery, Councilor of the Noble Secret Council for His Royal Catholic Majesty in the State of Milan, Hieronymus Fabricius of Aquapendente sends warmest greeting.

Your Excellency: I do not in these pages of mine, most Illustrious and Excellent Count, offer that banquet prepared in honor of his arrival for the ninth Emperor of the Romans, Aulus Vitellius, by his brother, of which emperor's very ancient family you are even now the representative and head by a long and indubitably true line of descent confirmed by historic proofs, though the name of the Vitelliani was by adoption changed, about the year 1439, to that of the Borromæi. I do not, I say, offer that celebrated banquet in which, by the witness of Suetonius in *The Life of Vitellius*, two thousand of the choicest fish and seven of birds are recorded to have been served up, besides livers of the sea-puffin, brainlets of pheasants and peacocks, tongues of flamingo, chitterlings of the moray eel, sought by the aid of shipmasters and triremes from so far away as Parthia and the Strait of Spain, were added by the Emperor's dearest brother. It is the foundation and rudiments of human life that I have to offer you. Yes, and not of the human merely but also of most animals, at least of those that differ from the ordinary structure of the rest. What more remarkable, what deeper, what more marvelous study can be described or invented than that? It is told that the Emperor Nero himself, taken perhaps with wonder at this very question, examined the body of his slain mother and showed a desire to behold that first home of man from which he had himself gone forth. And no wonder, for if there is in all nature any diligence, providence, or care, God, the Father of Nature, appears to have applied them all to the formation, nourishment, and preservation of the fetus alone. Wherefore the Prophet broke into speech thus: "I shall celebrate Thee, Lord, for that I am marvelously formed." The tender, delicate little embryo is born.

In 1550 Hollerius prescribed spectacles for myopia. In 1552 John Caius of St. Bartholomew's, London, published his work on the sweating sickness. In the following year Servetus was burned, but not until he had made extraordinary contributions to anatomy. Friederich published

his first tract on alcoholism in 1553; soon afterward Lange described chlorosis; Jacob Rueff's *De Conceptu* came in 1554, and a year later Pierre Franco performed suprapubic lithotomy; in 1558 Cornaro published his treatise on personal hygiene; Columbus in 1559 described pulmonary circulation; Stromeyer's treatise on ophthalmia appeared; then came Maurolycus with his studies of myopia, hypermetropia, and the optics of the lens; this was in 1560, the year Francis Bacon was born; the following year, 1561, was marked by the great Paré's work on orthopedics, Franco's on hernia, and Fallopius published his celebrated *Observationes Anatomicae*.

All historians agree that Fallopius took a great interest in his pupils and spared no pains to advance them. He soon formed a high opinion of young Fabricius and a warm attachment grew up between them. The young man matriculated, as we have seen, at a time of great mental activity in Europe, when a brilliant mind could not but be about some work, when the very air bore epidemic rumors that stung men to investigation. In every direction blew the incitement: over science, art, politics, religion; it had roused the preceding generation, and was to continue, in spite of Church and State and other vicissitudes, down to the present with increasing momentum. While Fabricius was studying under Fallopius at Padua, Tasso was writing the *Gerusalemme Liberata*; Michelangelo was planning the dome of St. Peter's; Benvenuto Cellini was working exquisitely in metal and stone and writing his inimitable autobiography; Palestrina was beginning modern music; Fuchs was devising a new botanical nomenclature; the momentous Council of Trent was in session; the Regius Professorship of Physic was endowed at Cambridge; in far Peru the University of Lima was founded; Elizabeth's reign began; the unrecorded youth of Cervantes was on its way to glory at Lepanto; Galileo was soon to be born, and, in the same year, Shakespeare. Great days! And Fabricius was of them.

His university, that of Padua, was governed by the student body, who even elected the faculty, whereas Cambridge, Oxford, Paris, and others of their type were controlled by the masters of arts. At Padua there were two separate corporations, each a university in the early sense; the corporations were called Universitas Juristorum and Universitas Artistarum, the latter including the faculties of divinity, philosophy, and medicine (not a bad juxtaposition, on second thought). During the medical session the whole human body was twice dissected in public by professors of anatomy; day was breaking when some of the lectures began and most of them were concluded by eight o'clock; Fabricius, when he became a professor, lectured at the more reasonable hour of nine.

Fallopius was but fourteen years older than Fabricius, and the two were fast friends, constantly together. After brilliantly passing his final examinations and receiving his doctoral hat, Fabricius often substituted as lecturer while Fallopius visited patients at a distance. This friend-

ship and collaboration was prematurely ended in 1562 by the death of Fallopius at the age of thirty-nine. Three years later the republic awarded the chair of anatomy and surgery to Fabricius, in his twenty-eighth year. For nine years he did not lecture, but limited himself to dissecting and operating before his classes. He was not alone in improving the methods of teaching; Oddi and Botoni, of the St. Francis Hospital at Padua, had already in 1558 made the first attempt in Europe at real clinical teaching; but Fabricius was to accelerate this advance. He built, with his own means, an anatomical theater, in which a hundred and fifty years later the great pathologist Morgagni worked; it gave place to a finer one erected by the Venetian Republic, which still stands; the seats are black with age, rising steeply in a semi-circle; no daylight enters, the demonstrations were lighted by candles; over the entrance is an inscription commemorating the generosity of Fabricius in erecting the superseded building.

Fabricius had a large practice and drew, besides, from the Venetian Senate a salary of a thousand scudi, together with the right to wear a robe of purple and gold and the gold collar of the knightly Order of St. Mark; he was granted precedence over all other professors of the medical faculty. Like his master Fallopius, he was eager to serve his pupils and was loved for his kindness as well as admired for his accomplishments; many men not connected with the university were devotedly attached to him. His high reputation for eloquence and for general and professional knowledge attracted students to Padua from all parts of the civilized world; Padua in several of its faculties was at that time the most famous of universities.

Of comparative anatomy Fabricius was a most laborious student; from its standpoint he treated the eye, larynx, veins, ear, and intestinal canal, the development of the fetus, and many other subjects. The improvements which his knowledge of anatomy enabled him to introduce into the practice of surgery were many and important, and his *Opera Chirurgica* (1617), which embraced every complaint curable by manual operation, passed through seventeen editions. His long career as a professor, fifty-four years, was a rich asset to Padua and the world of science. Many brilliant men began as his pupils. Casserius was one; his *Tabulae Anatomicae* comprise Correggio-like copper plates in which scientific accuracy and artistic perfection are wonderfully united; Doctor Holmes called them "eviscerated beauties." Another pupil was Caspar Bauhin, who later went to Basel as Professor; his work in anatomy and botany are famous and his discoveries were many; he was a well-known gynecologist, and he gave the first correct description of the appendix vermiformis.

But most brilliant of all was a young Englishman named William Harvey, who at the age of twenty-two became at Padua a pupil of Fabricius and Casserius, studying there from 1599 to 1603. The same interest that Fallopius had taken in Fabricius the latter in turn displayed toward

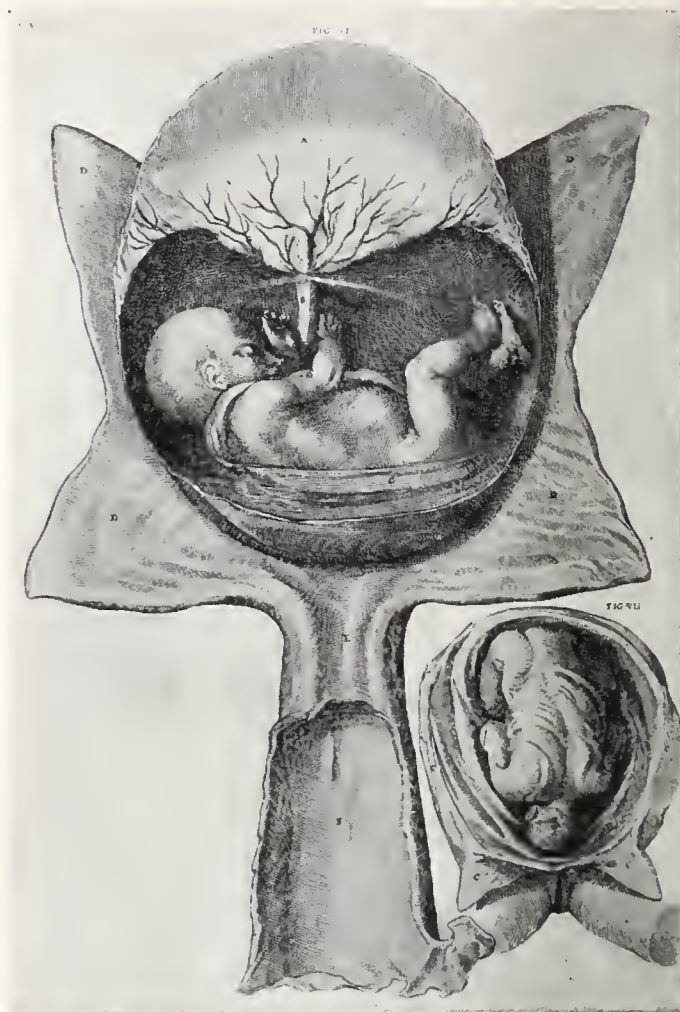


Fig. 4.—Figures vi and vii, Plate iii, of *De Formato Fœtu*. Figure vi shows the position of the fetus floating in the sudor, also the placenta with the chorion appended to it. A, the placenta with the chorion appended. B, the umbilical vessels. C, the sudor in which the fetus floats. D, D, D, D, the four parts of the uterus. E, the neck of the uterus. F, the open vagina. G, the more prominent branches of the vessels of the chorion. Figure vii shows the position of the fetus already trying to get out of the uterus. A, the head of the fetus. B, pudendum. C, the surface parts of the abdomen removed with a small knife.

Note: The explanations given above, and accompanying the illustrations following, are translations from the original Latin texts that face the pictures.

Harvey, who in later life referred affectionately to his teacher as "a most skillful anatomist and venerable old man." To what extent Harvey was inspired by his teacher is shown by D'Arcy Power in his charming biography in *Masters of Medicine*: "Indeed, when we look at Harvey's work, much of it appears to be a continuation and amplification of that done by Fabricius. Both were intensely interested in the phenomena of development; both wrote upon the structure and function of the skin; both studied the anatomy of the heart, lungs, and blood vessels; both wrote a treatise *De Motu Locali*." The world has heard much of the status of Harvey's *De Motu Cordis*, but the training Harvey got in Padua may have determined his zest for demonstration. The importance of Harvey's work is not so much in the discovery of the circulation of the blood as in its quantitative or mathematical demonstration. With this start, physiology became a dynamic science, and it was at Padua that Harvey's attention was first directed to purely mechanical explanations of vital phenomena.

(To be continued)

CLINICAL NOTES AND CASE REPORTS

VARICOSE VEINS

INDUSTRIAL COMPENSATION RELATIONSHIP: ARE THE DEEP VEINS PATENT?

REPORT OF CASES

By NORMAN J. KILBOURNE, M. D.
Los Angeles

GANGRENE of the leg, requiring high amputation, following excision or obliteration of varicose veins, has been reported several times when adequate tests for patency of the deep veins had been neglected. Such accidents may be prevented by the bandage test,¹ which consists in bandaging the leg tightly with a linen mesh bandage so that the superficial veins are occluded. If the circulation in the deep veins has been previously obliterated by phlebitis and that in the superficial veins has been now obliterated by adequate bandaging, the patient will have severe pain if he tries to walk. This test requires no special knowledge, and is so simple that in large clinics it can be performed by the nurses before the doctor sees the patient.

However, patients occasionally present themselves in whom the bandage test alone is insufficient. It is perfectly true that if there is no pain on bandaging, the deep veins are patent. But it was not intended that every patient who has pain when the leg is bandaged should be rejected. Such patients need intensive study, with additional tests. A case in point is here reported.

REPORT OF CASE

A workman, age forty-five, seeking industrial compensation, was seen in consultation. He complained of pain at the site of varicose veins, along the medial aspect of the left leg just below the knee, which he declared came on following an accident which happened while at work four months before. He declared that the leg became bruised and swollen at this location and had since then given him so much pain that he was totally incapacitated. When asked whether the pain was worse if he walked or if he stood on his feet, whether it was relieved after he lay down, whether it was worse at night, and whether it was present when he awoke in the morning, he replied at once that he had the pain all the time. Physical examination revealed varicose veins of moderate size at the location mentioned. When the bandage test was made the patient said he could not have the bandage on it—that it caused him excruciating pain.

1 1 1

Two questions were raised: First, was his pain due to varicose veins? Second, did the pain on bandaging, so as to occlude the superficial veins, mean that the deep veins were occluded?

1 1 1

There was no history of locking of the knee and no tenderness over the internal semilunar cartilage. An x-ray had ruled out bone tumor and proliferative periostitis. An excellent pulsation in the artery tibialis posterior ruled out arteriosclerotic changes. The

pain and tenderness were not up and down the leg along the distribution of any nerve. There was no discoloration of the toes and no pain in the feet; but to exclude more surely thrombo-angiitis obliterans, Samuel's test was made.

COMMENT

In Samuel's test the leg is elevated vertically while the patient is lying down. Then he is told to flex and extend his ankle alternately twenty times. If thrombo-angiitis obliterans is present, usually the sole of the foot turns pale and the patient has pain in the foot or cramps in the calf muscles.

When Samuel's test was made, the patient reported above complained of severe pain, not in the foot nor in the calf muscles, but superficially on the medial aspect of the leg just distal to the knee at the same old location as the varicose veins. There is no known organic disease that causes pain localized at such a point when Samuel's test is made. The patient's response to Samuel's test suggested malingering.

In answering the second question, as to whether the deep veins were patent, it was evident that reliance could not be placed upon the bandage test, for the patient was out after compensation and, therefore, complained of pain under any test. Objective tests not related to his accounts of his subjective feelings were necessary.

Perthe's test was made. In this test a tourniquet is applied above the level of the varicose veins, just tightly enough to obstruct the superficial venous circulation, with the patient standing. He then walks. If, after walking, the varicosities become much less prominent, it must be that the blood, although prevented by the tourniquet from flowing upward through the superficial veins, has been able to flow through communicating veins to the deep veins. Since these have drained the blood, they must be patent. The veins emptied quickly when he walked with the tourniquet on. This proved the deep veins patent.

A modified Trendelenburg test was also made. A tourniquet was applied around the thigh with the leg elevated. The leg was then lowered and the patient told to stand. The veins refilled at once, even before the tourniquet was released, showing that there was a reflex of blood through communicating veins from deep veins. This confirmed Perthe's test, demonstrating patency.

More serious is the problem when there is a frank history of deep phlebitis:

REPORT OF CASE

A housewife, aged thirty-four, complained of painful varicose veins for seventeen years which came on following an attack of phlebitis. There was much pain when the linen mesh bandage was applied. Was this because the phlebitis had obliterated her deep veins?

In this patient, when the Trendelenburg test was made repeatedly, with the tourniquet at successive levels on the leg, the varicose veins refilled immediately. This indicated that the blood came through communicating veins from patent deep veins. Injections were made. For several days

after each injection there was pain in the legs. However, this time the pain after injection was relieved, rather than made worse, by wearing a linen mesh bandage. Such relief is characteristic of injections following an old phlebitis.

Mechanical tests alone for the patency of the deep veins are insufficient when there is a past history of phlebitis. The tests may demonstrate the patency of the deep veins now, but injection may stir up the old phlebitis in deep veins and occlude them. Such patients should be treated rarely, if at all, by the occasional worker. A detailed discussion of factors involved in these cases, with special precautions needed, has been made by the author² and by Delater.³

2007 Wilshire Boulevard.

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ASPERGILLUS DERMATOMYCOSIS*

REPORT OF CASE

By HOWARD A. BALL, M. D.
San Diego

ALTHOUGH skin infections with aspergilli are known to exist in tropical countries, surprisingly few cases have been described from the United States. This dearth of cases seems out of proportion to the frequency with which the infection is casually mentioned by dermatologists. Puestow⁴ and Myers and Dunn³ have each recorded a case, while Lynch² in a general way associates such an infection with *Leptus* bites. Aside from these articles very little of a specific nature is recorded. It is therefore deemed advisable to describe the following case.

REPORT OF CASE

H. C., a Mexican male laborer of thirty-five years, entered San Diego County General Hospital June 18, 1931, on the skin service of Dr. Philip K. Allen. Three weeks previously, he first noticed a reddened swelling on the dorsum of the left hand and wrist while working in a sewer ditch. This ulcerated very rapidly (twelve hours) and gradually increased in area. There were swollen glands in the axilla, but no fever or other systemic symptoms. General physical examination was negative. Several days after admission, a reddened area was noted near the left eye. Superficial x-radiation was administered to both lesions without improvement. Several cultures from the wrist lesion yielded staphylococci. Urinalysis and Wassermann were negative. Blood count showed a total of 11,800 whites per millimeter,³ with 70 per cent neutrophils and 6 per cent eosinophils.

* From the department of pathology, College of Medical Evangelists, and the pathology laboratory of the San Diego County General Hospital.

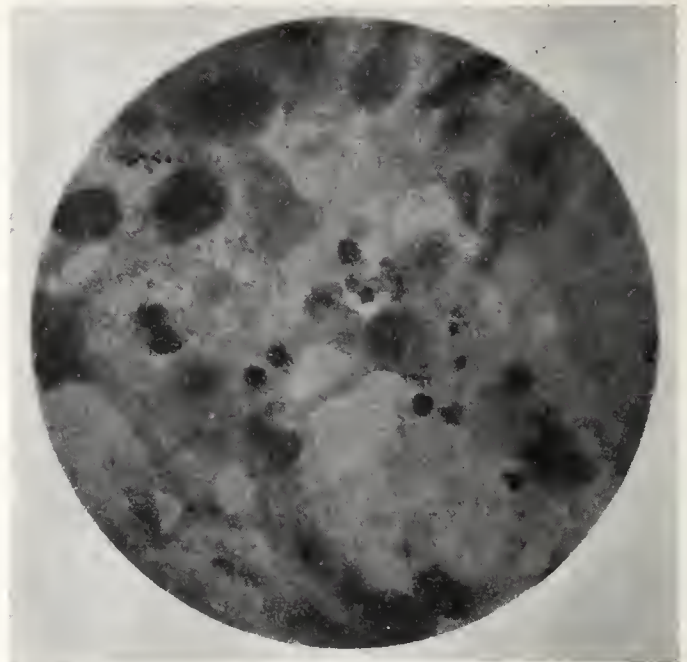


Fig. 1.—Small Gram-positive yeast-like bodies found in biopsy material with Gram-Weigert technique. 1250 X.

Two weeks after admission biopsy was resorted to in an attempt to clarify the diagnosis. This presented epithelioid hyperplasia and intra-epithelial abscesses quite similar to the picture seen in blastomycosis. Prolonged search did not reveal any such organisms. Gram-Weigert technique was employed in an attempt to demonstrate fungi of the "yeast type."

Deep in the cutis, and where the inflammatory exudate was thickest, small Gram-positive yeast-like organisms were found in groups, but could not be demonstrated to be budding (Fig. 1). These resembled very much organisms of the monilia group previously seen in tissues by the writer in a case reported as "torula."¹

Meanwhile the lesions had considerably improved with copper sulphate wet dressings and internal sodium salicylate administration and the patient was discharged to the outpatient clinic with instructions to return in one week. He failed to return for several weeks. He again presented himself at the hospital nineteen days after discharge, in a much aggravated condition.

At this time the lesion on the hand had spread considerably. Lesions on the face were very pronounced and presented small pustules but no ulceration. There was marked swelling, involving the region of both eyes, which extended to the conjunctival margins. The appearance at this time is shown by the illustrations (Figs. 2 and 3).

Cultures on Sabouraud's medium and plain agar and Loeffler's blood serum made during the previous admission were negative except for Loeffler's, which after one week's time showed a growth in the thinnest portion of the slant that had become somewhat dry. This was later successfully transferred to Sabouraud's media made with either maltose or dextrose. The appearance of the growth varied considerably between these two sugars.

At the second admission, cultures were made from the small pustules on the face but no growth was obtained. Wet mounts, however, presented asci having thick side walls and thin ends, filled with endospores. They were elongated (about 15 microns) and presented rather square ends.

The patient again improved on copper and zinc sulphate wet packs externally and sodium iodid intravenously and potassium iodid by mouth. He was discharged to the outpatient clinic four weeks after the second admission, much improved. The lesions subsequently progressed to complete healing.



Fig. 2.—Appearance of skin lesions on hand.



Fig. 3.—Appearance of skin lesions on face.



Fig. 4.—Wet mount of culture showing characteristic fructifying arrangement of an aspergillus. 500X.

COMMENT

The original culture was obtained on Loeffler's blood serum at the end of one week in the portion of the slant somewhat dried from incubation. The appearance was that of a fine white powder or frost. This was transferred to Loeffler's serum several times with a constant appearance except in one instance when, after two months, darker colonies similar to those characteristic for Sabouraud's appeared. On Sabouraud's dextrose agar, the colonies appeared in twenty-four hours. They were at first discrete whitish mound-shaped colonies which soon fused. At the end of three days they began to take on a greenish cast and gradually changed into a very dark brown. Through this brown growth, covered with dark hyphae, appeared at the end of ten days to two weeks a snow-white tuft or two of hyphae, which maintained their whiteness and gradually spread.

Quite different was the growth on Sabouraud's maltose. In this instance the growth spread over the surface of the medium, causing deep furrows and wrinkles. Aerial hyphae were scarcely discernible, except in the drier portion of the slant. The color changes occurred much more slowly and an orange transition phase was observed. This was then replaced by the greenish color.

In broth the colonies appeared as fluffy balls which grew to a diameter of about four millimeters. The colonies at the surface fused and spread over the surface of the medium. These colonies presented a dry growth with fine hyphae. Microscopically the organism is composed of numerous mycelial threads and small round organisms approximately one-half the size of red blood corpuscles. Occasionally a terminal branch is seen, bearing on its free end a mass of organisms arranged in such a manner as to identify the organism as an aspergillus (Fig. 4). The cultural characteristics have gradually changed during six months' cultivation.

The organism is distinctly an aspergillus, but is not further classified.

Two attempts to inoculate the abraded surface of the forearm of a volunteer human subject with this organism have failed. The conditions of the original infection cannot be said to have been duplicated, however, and the additional possibility

exists that the vegetative stage on culture media differs in pathogenicity and from that found in the soil. Such is the case with certain other fungi. Whether or not bacterial infection must also be present is unknown.

San Diego County General Hospital.

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Calls Character More Important Than Grades.—Uncertain character and shocking manners are found in graduates of colleges and often of professional schools, said Nicholas Murray Butler, president of Columbia University, in his annual report made public in late December. Doctor Butler feels that the mere passing of examinations should not win the student advancement.

"The capacity to pass these intellectual tests should rank third in estimating the educational progress of a student," Doctor Butler declared. "Evidences of character-building should come first, and evidences of his good manners and respect and concern for others should come second; and, these lacking, no amount of intellectual performance of any kind should win him advancement or graduation. Such a one would not be educated at all; he would only have been instructed in some degree in the subject-matter of a given field of knowledge."—*A. N. A. Bulletin*.

Graduate Versus Undergraduate Nursing.—By abandoning its school of nursing and substituting a graduate staff, a sixty-bed Canadian hospital reduced its per capita cost 74 cents a day, according to an analysis of government figures. Grace M. Fairley, superintendent of the school for nurses, Vancouver General Hospital, discusses the change in nursing service in the *Canadian Nurse* for November.

Besides the financial saving, the superintendent of the hospital found five other advantages in a graduate staff: (1) there can be closer supervision of the smaller group of workers (that is, the graduate staff); (2) the greater sense of responsibility, especially of hospital property, results in more economical use of all supplies, particularly record forms, dressings and linen; (3) there is less illness among the graduate staff, with consequent reduction of relief staff and cost of care during illness; (4) a fluctuation of staff is possible with graduate personnel if or when there is a reduction of patients; and (5) the patients are getting better service.—*A. N. A. Bulletin*.

BEDSIDE MEDICINE FOR BEDSIDE DOCTORS

An Open Forum for brief discussions of the workaday problems of the bedside doctor. Suggestions of subjects for discussions invited.

THE FLAT-FOOT

A. GOTTLIEB, M. D. (727 West Seventh Street, Los Angeles).—*Prognosis.* In this discussion of prognosis and treatment of flat-foot, "the static flat-foot" only is here considered.

Based upon the etiologic axiom that flat-feet result from a disproportion between the weight-bearing capacity of the feet and the load they are called upon to carry, the prognosis must be evaluated and the treatment executed.

From the viewpoint of prognosis it is not the shape of the feet on weight bearing which should be deliberated, but their function and the freedom from subjective symptoms.

The capacity of the feet to bear weight must be increased by attacking all those factors which have the tendency to lower this capacity. Remote foci of infection, chronic constitutional diseases, long recumbency, established faulty foot posture and, mainly, ill-fitting shoes, have the tendency to weaken the foot structures, principally the foot and leg musculature. The prognosis is in direct proportion to our ability to eradicate or ameliorate these etiologic factors. In many respects the outcome rests upon the patient's obedience to properly carry out the instructions given in the course of the treatment.

The load which the feet have to carry must be controlled by attention to matters such as body-weight reduction, changing the occupation which requires prolonged upright position, or carrying of heavy loads.

Upon the ability to augment the functional capacity of the feet and upon the lessening of the superimposed weight, the prognosis necessarily depends.

Treatment.—For the successful treatment, three things are requisite: (1) Properly fitting shoes with the required correction of the heel and, at times, sole. (2) Physical and mechanical treatment, including exercising and physiological walking. (3) Supports, whenever indicated, as a temporary measure. Let us consider these in more detail.

1. *Shoes.*—A laced shoe with a flexible or semi-flexible shank should be provided. It should fit snugly enough to make the foot follow its movements and should have a front sufficiently wide and long to permit the spreading of the toes and lengthening of the foot on weight bearing. The height of the heel must vary according to the ability of the patient to dorsiflex the foot. The high heel habit should be overcome only gradually; a sudden change to low heel will result in stretching pain in the calf and thigh. The inner side of the heel, in some cases also the sole, should be raised by inserting a wedge in order to tilt the foot and throw the body weight outward. The

thickness of the wedge must be so adapted to the individual need that the corrected shoe, plus the support, will form a mechanical unit that allows the foot to rest on its normal points of stability (the outer border, the heel, and the heads of the metatarsal bones). Correct shoe fitting is of prime importance for any, even for the normal, foot.

2. *Physiotherapy.*—Physical and mechanical measures should be applied in order to restore foot elasticity, to reduce inflammation of joints and soft tissues, to regain muscle strength and to acquire the habit of correct foot posture.

The exercises of the simplest kind should be taught. In addition to the classical one, found in any textbook, two may be added. They are of the active-resistive type.

To strengthen the supinators, the tibialis muscles, the patient, seated, places the outer border of the lower third of the leg on the opposite knee. He actively supinates the foot and resists this motion with the palm of the hand against the first metatarsal area. During this act the foot is held at right angle and the toes are flexed.

To increase the power of the intrinsic foot muscles, the patient places the bared feet in a basin of hot water and grasps with the toes small pieces of rubber tubing which float on the surface of the water. This active-resistive toe-gripping is more effective than the customary picking up of marbles.

The formation of the habit of correct standing and walking is the most important element in the treatment. Standing and walking should be executed with the feet inverted or, at least, parallel, so that most of the weight is carried on the outer, namely, the stronger portion of the foot.

3. *Indications for Arch Supports.*—The contour of the foot is the least consideration, since we find low-arched feet with discomfort and high-arched ones with unbearable pain on weight bearing. Pain alone should serve as an indication for the need of a supporting device. The pain may be called "pain of insufficiency" and is produced by straining of the ligaments, fasciae, and joints. It should be strongly emphasized that the support is only a temporary measure, worn as long as pain lasts and discarded when the symptoms cease.

The support has a threefold object. (1) It relieves the tired and weakened leg and foot muscles from undue strain during the active part of the day. (2) It retains the arches in that position which the feet are able to assume by voluntary muscular effort or by passive restoration. (3) It takes the strain off the plantar fascia and the ligaments of the feet.

These objects the support shares with any brace. As such only should it be regarded. It should

not be expected of a support that it will restore or rebuild the foot arches. The only agent for this rebuilding process is the musculature. To the muscles all attention should be directed so that they may regain strength to better perform their task.

Whether metal supports, leather insoles with sponge, rubber or felt pads, whether hard leather, celluloid or any other material is used in the construction of the support makes no difference as long as they are made to conform to the corrected shape of the foot, hence "made to order" and not purchased over the counter. It must be admitted, however, that any rigid foot support is harmful because it converts the elastic foot into a rigid system, is liable to produce periostitis from pressure and prevent normal function of the planta muscles. A properly fitted and adequately constructed shoe may make the support needless.

At all times, patients must be impressed with the fact that the cure depends largely upon their willingness to coöperate in the treatment: to adhere to the selected and corrected shoes, to execute faithfully the prescribed exercises, and to adopt and maintain the habit of physiologic foot posture in standing and walking.

* * *

H. H. MARKEL, M.D. (384 Post Street, San Francisco).—The diagnosis of flat-foot conditions is sometimes very obvious, but many times flat-feet give no symptoms whatever. A correct diagnosis must be arrived at by the same route as in any other line of medicine, from history taking, symptoms and signs.

Regarding Diagnosis.—The diagnostic symptoms are fatigue and pain, and the diagnostic sign is tenderness.

The following is the order of examination which will lead to the correct diagnosis:

History taking: Onset, previous attacks, character and location of pain and time of occurrence.

Examination: Shoes and stockings off. Examination of the soles and heels of the shoes frequently gives clues. Note posture of body and position of feet. Patient to supinate feet, turning over on the outer sides of feet.

Palpation and manipulation: Find tender areas and determine condition of flaccidity or rigidity to determine ligamentous relaxation or muscle spasm. Determine if there is a shortness of the heel cord. (Normally the foot should dorsiflex fifteen degrees above a right angle, with the knee straight.)

Final diagnosis is arrived at by eliminating the conditions which give similar signs and symptoms.

A therapeutic test is very often of value, consisting of a pad and strapping with adhesive.

Types of Flat-Foot.—The following are the usual types of flat-foot with their signs, symptoms, and differential diagnoses.

I. *Acute Foot Strain.*—(a) History of pain in feet and up the legs, even as far as the knees, usually bilateral, occurring after weight bearing, especially standing. Relieved by rest and aggravated by use.

(b) Inspection shows flattened longitudinal arch with the feet more or less everted and pronated.

(c) Palpation and manipulation shows the feet to be flexible and tender upon pressure over the astragaloscaphoid ligament.

(d) Therapeutic test by felt pad and adhesive plaster strapping the foot in supination usually gives relief of pain.

Acute foot strain must be differentiated from:

1. Arthritis of the tarsus by the fact that in arthritis the foot is more or less rigid and manipulation is painful.

2. From sciatic pain caused by low-back strain and sacro-iliac arthritis, by the positive Kernig test and the therapeutic test of strapping the feet.

3. Intermittent claudication, by the peculiar history of cramp-like pain coming in the calves after walking a few blocks, and complete relief by a few minutes' standing; also by the absence of the pulse in the dorsalis pedis and posterior tibial arteries.

II. *Rigid Flat-Foot with Peroneal Spasm.*—

(a) History of intermittent pain and limping and tiring; usually in one foot, and frequently happening with children.

(b) Inspection reveals the fact that one or both feet are markedly everted and that the patient cannot supinate the foot by turning the ankle out and the foot inward.

(c) By manipulation the tarsus is rigid and attempts to supinate the foot, causing extreme pain through the tarsus and along the peroneal muscles.

Differential Diagnosis:

Rigid flat-foot with peroneal spasm must be differentiated from:

Arthritis of the Tarsus.—(a) Occurs in older people usually.

(b) Chronic course and not intermittent.

(c) Pain is worst in the morning when weight bearing is first assumed but relieved after a while by use, and again aggravated at once by use after resting.

Tuberculosis of the Ankle.—(a) By marked limp with long chronic course, occurring in children.

(b) X-ray showing destruction of bone in astragalus usually.

(c) Positive skin test for tuberculosis.

Anterior Metatarsalgia.—1. History of intermittent pain in the ball of the foot, usually one foot. The pain is like a cramp or a hot needle and is felt most frequently between the heads of the fourth and fifth or third and fourth metatarsals. Pain always comes on while patient is wearing shoes and is relieved by removing shoes and rubbing and manipulating fore part of the foot.

2. Upon inspection the longitudinal arches may be normal but the fore part of the foot is broad and flat with a depression on the dorsum in the region of the painful area. Hard calluses are frequently found on the sole of the foot beneath one or several metatarsal heads.

3. If lateral pressure is made by the hand grasping the ball of the foot while the affected metatarsal head is depressed between its neighboring heads, a severe pain is produced. A short heel cord is found very frequently to complicate and aggravate this condition by depressing the anterior arch.

4. The therapeutic test is usually successful here also by using a felt pad and adhesive plaster, binding the fore foot circularly with adhesive and a felt pad just back of the metatarsal heads, but not neglecting to support the longitudinal arch as well by pad and strapping.

Anterior metatarsalgia must be differentiated from:

1. Fracture of the metatarsal bones and phalanges by careful history and x-ray examination.

2. From plantar warts by paring the suspected area with a razor blade or scalpel when the peculiar stippling will be found in a small rounded area which points deep down through the skin.

3. Also fractures of the sesamoids beneath the big toe joint must be excluded and differentiated from a double sesamoid. The former shows an irregular line between the fragments which may or may not be equal in size, while double sesamoids look like two coffee beans with a smooth straight line between them.

* * *

HAROLD E. CROWE, M. D. (Orthopaedic Hospital, Los Angeles).—In all branches of surgery, but possibly more so in orthopedics, differences in technique and methods of treatment are an interesting and endless source of discussion.

In our treatment of relaxed and painful feet the shoe is looked upon as a mechanical means of maintaining a weakened architectural structure, and must always be stiff-shanked, having a steel arch built in from heel to sole. This is based on the obvious argument that if a shoe is to support weight its material must be strong enough to bear that weight without giving under the load. The group of orthopedists who use flexible shanked shoes present the equally fair argument that a splinted extremity will not develop its intrinsic musculature and will become stiff from disuse if its natural powers of motion are not encouraged.

Similar variance is noted in placing an inside tilt in the sole of the shoe. Since the pronation of the foot behind the midtarsal joints is necessarily combined with the opposite rotary motion or supination of the fore foot, an inside sole tilt only serves to maintain or increase the existing deformity. The sole tilt, therefore, if used at all is much better placed under the outside of the sole as it then helps to correct the abduction and supination which is always present beyond the midtarsus in relaxed feet. This last point, which is contrary to current teaching, is evident if one stops to consider the fact that as the arch sags down to the inside in its posterior pillar, the first metatarsal head is raised in relation to the foot as a whole; or in other words, the process of arch relaxation is a progressively increasing pronation of the ankle combined with progressive supination of the foot distal to the astragaloscaphoid joint.

These ideas are used in the treatment of feet in childhood just as in adult life. The pronated flat-feet and knock-knees of children under six years are so common that some doctors are inclined to consider this condition normal and advise parents not to worry: "The child will outgrow it."

This statement is absolutely right if corrected to read: "The child will partially outgrow it." While they were unaware of any deformity a review of several hundred young adults has shown mild knock-knee with a toe-out gait, indicative of slight foot relaxation in the same proportion found among babies. These persons are free from symptoms, but as a rule are not athletes; and the slight residual deformity is a liability in that future time when sedentary occupation is combined with spasmodic strenuous exercise or in women when the menopause brings a rapid increase in weight and consequent strain to otherwise symptomless feet.

The normal baby should begin to lift the long arch from the ground between twenty-four and thirty months of age, but, in city-bred infants, deprived of the sun-baked naked life of uncivilized peoples, there is enough retardation in bone development to prolong the flat-foot with consequent knock-knee to five or six years or even longer. This is true in children who have never shown any definite rachitic lesions. In such children it is possible, by using inside heel tilts on stiff-shanked high shoes supplied with soft arch pads, to promise rapid correction of the leg alignment with growth. This much can be promised and, with the exception of about five in a hundred cases, the formation of the foot will also progress normally, permitting the discontinuance of all mechanical support at about fourteen years. In the five exceptions, cases of congenital flat-foot, the support may be removed after years of careful guidance; and while x-ray pictures of the foot at rest will show a normal foot, x-ray or clinical examination of the foot bearing weight will show a flat-foot. These cases are surgical problems.

Flat-foot operations have been devised by numerous orthopedic surgeons. We use that operation published by Lowman in 1923, which is based on the little recognized but obvious fact that the anterior tibial tendon pulling directly upward under the transverse ankle ligament and directly backward from its insertion on the inside of the base of the first metatarsal, is a deforming factor in flat-foot after that lesion has passed a certain degree, so that development of this muscle actually tends to deform rather than correct the foot, as is commonly taught. The operation consists simply in redirecting this tendon through the astragaloscaphoid joint from below up without cutting it free from its normal insertion, and in lengthening the short heel cord which is usually found in these cases. In making a bed for redirecting the tendon it is possible to correct the bone deformity. This simple operation gives a foot which maintains its position without mechanical support and which retains the mobility of a normal foot.

Operative treatment is reserved for those rare cases in which structural variations are complicated by symptoms justifying such intervention. The great majority of foot faults and the associated faults of leg alignment in children are amenable to correction through the simple and comparatively inexpensive process which may be called "guided growth."

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senate concurrent resolutions and fifteen joint senate resolutions. The State Assembly history, on the other hand, lists 2313 new laws proposed by state assemblymen, plus ninety-two assembly constitutional amendments, thirty-four assembly concurrent resolutions, and twenty assembly joint resolutions. These facts are here enumerated to indicate to members of the California Medical Association the mass of proposed legislation which our state law makers consider and favorably or unfavorably act upon, in their brief three or four months' session.

* * *

Why Is a Legislative Session of Importance to the Medical Profession?—There may be some who may be tempted to say, "But what has the organized medical profession to do with all this, and why should physicians be concerned about these many proposed laws?" The answer is that the title of every one of these laws must be carefully scanned; and every proposed measure which has a title that seems to have even a remote relationship to public health activities must then be inspected and carefully read, to determine whether anything in the text would make for desirable or undesirable public health legislation. The burden of doing this important and laborious service for the profession falls on the shoulders of a few officers and committeemen of the California Medical Association. From the standpoint of time and energy required, and of responsibility borne or additional work to be done, theirs is not an easy or an enviable task. For, through past experience, these officers and committeemen know that no matter how wholeheartedly and wisely they give of themselves, that more or less legislation undesirable from the best public health and medical standards will be enacted. How much of such undesirable legislation is enacted at any particular legislative session, depends not only upon the alertness and astuteness of the officers who are on guard in these matters, but also in good part upon the interest which the members of the California Medical Association, as individuals and through their county societies, display in coöperating with the State Association representatives.

The California Medical Association county societies can render important aid through their local state senators and assemblymen. The December CALIFORNIA AND WESTERN MEDICINE, on page 426, printed the roster of the present legislature, giving names, home addresses and other information concerning state senators and assemblymen. The February CALIFORNIA AND WESTERN MEDICINE, page 136, printed maps showing the various senatorial and assembly districts. An inspection of those presentations should indicate the further complexities of a legislative session.

* * *

List of Public Health Bills Printed in This Issue.—Readers who wish to orientate themselves further concerning proposed legislation having a

EDITORIALS*

PROPOSED PUBLIC HEALTH LAWS BEFORE THE CALIFORNIA LEGISLATURE

The 1933 California Legislature.—On January 2, 1933, the California Legislature began its fiftieth session, meeting for twenty-one legislative days through January 28, on which day it began its constitutional recess; to reconvene on February 28, then to continue until adjournment, which will probably be some time in April.

* * *

The Legislative Record to Date.—We have before us the volume known as the "Senate and Assembly Semi-Final History." It is a book with 310 pages devoted to the Senate and 541 additional pages devoted to the Assembly; or 851 pages on which are printed in fairly small type the titles of proposed laws and their present status in senate or assembly committees.

The State Senate history gives a list of 1164 new laws proposed by State Senators, plus forty proposed constitutional amendments, seventeen

* Editorials on subjects of scientific and clinical interest, contributed by members of the California Medical Association, are printed in the Editorial Comments column, which follows.

relationship to public health and medical matters, are referred to the miscellany department of this issue of CALIFORNIA AND WESTERN MEDICINE. There will be found a list, sent us through the courtesy of Dr. C. B. Pinkham, secretary of the California Board of Medical Examiners, in which most of the proposed laws having to do with the public health or healing art practice are grouped under various subheads. It is printed not only for its special reference value, but also to permit California Medical Association members to visualize better the tremendous task confronting those officers and committees who are called upon to follow these various measures in their legislative course and to take action thereon and intervene, should that be necessary. (For list, see page 221.)

* * *

Comments on Some of the Proposed Laws.—To discuss even the more important of the proposed laws enumerated in the list printed elsewhere and above referred to would require practically an entire issue of CALIFORNIA AND WESTERN MEDICINE, and that is out of the question. However, before leaving this phase of the subject, it may not be amiss to give some excerpts and brief comments on certain of the proposed laws. In due time the California Medical Association Committee on Public Policy and Legislation, of which Dr. Junius B. Harris of Sacramento is chairman (see advertising page 2 for committee), will inform the officers of county societies when aid is needed. Your part as a member, if you are interested, is to inform your county society officers by letter or telephone if you think you can be of special service, so that your services may be utilized should your aid be needed later on. For such coöperation your county and state officers will be appreciative.

* * *

A County Hospital Bill (A. B. 2190; S. B. 782). Let us here first take up Assembly Bill 2190, introduced by Assemblyman Bliss of Carpinteria, Santa Barbara County. Its companion measure of same purpose and text was introduced as Senate Bill 782 by Senator Mixter of Tulare County. If either of these bills becomes a law, the county hospitals of California will be opened to the admission of non-indigent citizens; the counties to collect moneys for such hospitalization from such citizens. The effect of such a state hospitalization activity upon the private and semi-private hospitals which have been rendering service to our communities through all the years up to now, may easily be imagined. The charitable and non-profit work of such private and semi-private hospitals has kept practically all of them more or less impoverished. The enactment of either of the above bills would complete the picture of demoralization. After that, however, would come the demoralization of the taxpayers of the counties when they would be called upon to foot the increased county hospital bills for the care of these non-indigent citizens. In a county such as Los Angeles, for instance, it would be

easy to add an annual \$1,000,000 extra cost burden to that county, through the institution of such a system. That is a sum which in days such as the present should make even so rich a county as Los Angeles to stop, look and listen.

The provision that non-indigents should pay the counties does not always work out well in practice, as witness, San Luis Obispo County, where recently, we are told, the Supervisors felt obliged to cross off a large sum due that county from non-indigents and are now facing legal difficulties as a result of their action. If such a system of payments to counties were adopted, it is pertinent to ask whether such non-indigents could expect professional services from attending staff members who are giving free service to indigent patients. It is our viewpoint that attending staff members could and probably would refuse to render free professional services to such non-indigents. Is there any rule of medical, business, or social ethics which demands that physicians shall not be paid for their services to non-indigents? As a matter of fact, we are coming to a time when members of the profession who are on attending staffs of public hospitals should and probably will demand compensation for services rendered even to indigents. Do citizens in business consistently give without cost, goods to all applying indigents, and do members of other professions render such massive gratuitous aid as physicians have been in the habit of generously giving to the poor of the community? Is it not time to take stock and to devise ways and means to call a halt on some of this professional work, so often unappreciated not only by the indigent recipients, but also, what is far worse, by the taxpaying citizens who are thus relieved of this portion of the costs of a humanitarian burden?

Assembly Bill 2190 is not long, and we here reprint its somewhat similar Senate companion measure exactly as sent out by the State Printer. It reads thus:

SENATE BILL

No. 782

INTRODUCED BY SENATOR MIXTER

January 28, 1933

Referred to Committee on County Government

An Act to amend section 4223 of the Political Code, relating to the duties of boards of supervisors

The people of the State of California do enact as follows:

- 1 SECTION 1. Section 4223 of the Political Code is hereby
- 2 amended to read as follows:
- 3 4223. The board of supervisors in each county may estab-
- 4 lish and maintain a county hospital or branches thereof,
- 5 prescribe the rules for the government and management
- 6 thereof and appoint a county physician and the necessary
- 7 officers and employees thereof who shall hold office during the
- 8 pleasure of the board; and said board shall also have power
- 9 to admit residents of the county to said hospital or its branches
- 10 who are not completely destitute but who are able to pay a
- 11 reasonable charge for the services rendered; said board shall
- 12 have power to establish reasonable charges not to exceed the
- 13 actual cost to the county for the services rendered by said
- 14 hospital or its branches.

Bills for a Board of Naturopathic Examiners.—Assemblyman Gilmore of San Francisco, has introduced A. B. No. 1159, the title of which reads:

"An Act to create a public corporation to be known as the 'Naturopathic Association of California,' to provide for its organization, government, membership and powers, to regulate the practice and licensing of Naturopathic Physicians, to create a board of governors and to provide for the appointment of a State Board of Naturopathic Examiners, and to provide penalties for violations hereof."

There is another bill (A. B. 1306) introduced by Assemblyman Dempster of Los Angeles, in which it is stated that it has been introduced "By Request." The title of the Dempster bill is as follows:

"An Act to regulate the practice of naturopathy, to establish a State Board of Naturopathic Examiners, to provide for their appointment and prescribe their powers and duties, defining the practice of naturopathy and prescribing the terms upon which licenses may be issued for such practice, prescribing penalties for violation hereof, and repealing all Acts and parts of Acts inconsistent herewith."

Just what is the purpose of these dual measures, with their rather diverse set-ups, we do not know. If space permitted, either of these proposed measures could be made the basis of interesting comment. Each is a typical expression of cultist medicine standards: preliminary education of high school standard or its equivalent (the "equivalent" one of those elastic standards determined by the board itself instead of by an impartial, high standard basic science board); and professional training, far, far below the standards existing for years past in non-sectarian medical schools. Why a great commonwealth such as California should insist on high standards of preliminary college education and at least four years of strenuous professional training for non-sectarian physicians, and then turn around and legalize groups of cultist or sectarian healing art practitioners on much lower standards of preliminary and other training, seems incomprehensible. Yet such is the case. It is one of the interesting sidelights on modern day inconsistency.

Space does not permit going into a further discussion of these two measures, but the last paragraph of Section 17 of A. B. 1159, which should be of interest to the medical schools of California, may be here reprinted:

"Approved naturopathic colleges shall have the right to receive bodies of the unclaimed dead for the purpose of instruction and study and to obtain at the time of necropsy or inquest such material in the recent state as may be needed for scientific purposes in like manner and under the same provisions of law as such dead bodies and materials are received, secured and obtained by other institutions and persons for such purposes; and the State Board of Health shall assign and allot the same to naturopathic colleges, lawfully entitled thereto in the order of requests therefor received by it; and no school lawfully entitled to receive the same shall receive more than one such body until other such schools which have so requested the same have likewise received one such body."

* * *

An Act Defining Clinics.—Assemblyman Nielsen of Sacramento has introduced A. B. No. 1277, the title of which reads:

"An Act defining clinics and dispensaries and providing for the operation, conduct, maintenance, and the examination and regulation thereof, and the issuance of permits therefor by the State Board of Public Health and the Director of Public Health."

Supervision of clinics and dispensaries has long been much needed. That, no one can deny. This bill will no doubt receive careful consideration.

Comment on A. B. 795, which would license roentgen-ray technicians, will be found in a letter printed in the Correspondence column. (See page 225.)

* * *

Proposal to Abolish the State Medical Board.—Assemblyman O'Connor of North Hollywood, Los Angeles, through his A. B. No. 1813, naïvely proposes in a brief and rather incomplete measure to do a wholesale abolishing job, as witness Section 2 of his proposed statute. His bill will no doubt be properly taken care of. Section 2 follows:

"Sec. 2. The Department of Professional and Vocational Standards and all boards and officers under the jurisdiction of said department are hereby abolished and all the powers and duties of said board and officers in said department at the time this Act takes effect are hereby transferred to, placed in and under the jurisdiction of the following departments:

- (a) To the Department of Health:
 1. Board of Barber Examiners;
 2. Board of Cosmetology;
 3. Board of Dental Examiners;
 4. Board of Embalmers;
 5. Board of Medical Examiners;
 6. Board of Optometry;
 7. Board of Pharmacy; and
 8. Board of Veterinary Medical Examiners.
- (b) To the Department of Finance:
 - Board of Accountancy.
- (c) To the Department of Public Works:
 1. Board of Architecture, northern and southern districts;
 2. Board of Registration for Civil Engineers; and
 3. Registrar of Contractors."

* * *

Proposal to Transfer a Licensing Board's Funds to the State's General Fund.—The purpose which Assemblyman Cobb of Los Angeles hopes to accomplish through A. B. No. 2250, Sections 1 to 3 of which are printed below, we do not know. If, however, it means a transfer into the general fund of the state (which is used for miscellaneous purposes such as roads, prisons and what-not) of moneys collected through license fees of pharmacists and so on, and which moneys so collected should be allocated to the development of the standards of the pharmaceutical profession and the protection of the public from incompetent pharmacists, then the matter does become of interest to all professions. For once such a precedent is established, attempts in other directions would be made. Members of the learned professions submit to licensure fees as special taxes only when such special taxes are used for the protection of the people through the maintenance of the standards of their respective professions. It would be a gross injustice through special or class legislation to make professional men who pay real and personal taxes, also pay special licensure taxes into the state's

general fund, when no such special taxes are levied on citizens in various lines of business. A. B. 2250 reads thus:

"An Act to repeal an Act entitled 'An Act making an appropriation from the contingent fund of the State Board of Pharmacy to be used by the Regents of the University of California for the use and benefit of the College of Pharmacy of the University of California,' approved May 28, 1931, declaring the urgency thereof, and providing that this Act shall take effect immediately."

"Section 1. The Act cited in the title hereof is hereby repealed.

"Sec. 2. Upon the effective date of this Act, the State Treasurer shall transfer to the credit of the general fund any unexpended balance remaining out of the appropriation made by the Act hereby repealed.

"Sec. 3. This Act is hereby declared to be an urgency measure necessary for the immediate preservation of the public peace, health, and safety, within the meaning of Section 1 of Article IV of the Constitution, and shall therefore go into immediate effect. The facts constituting the necessity are as follows: The general fund is depleted and it is necessary to augment this fund in order to meet the state's obligations for the present fiscal year."

* * *

In Conclusion.—It is not possible for the editor to discuss many of the bills on his desk and which are listed elsewhere in this issue, because he does not know what decisions thereon will be reached by the California Medical Association Council and the Committee on Public Policy and Legislation. What has been here presented may be taken as an indication of the task before the profession. Our comments have been made in the hope of securing the attention and active interest of California Medical Association members in this important prospective legislation, so much of which could greatly affect professional and economic interests.

In conclusion, let it again be remembered that the medical profession's viewpoints must be given to Senate and Assembly Committees through its official spokesmen. Our official spokesman at Sacramento is the Committee on Public Policy and Legislation, acting under instructions of the California Medical Association Council, which in turn, through its contacts with the county societies, aims to base its decisions on the best general and local policies and needs. If you who read this wish to help in the work, send in your suggestions to your county society officers; and they in turn will consider the same and then forward them to the California Medical Association officers.

COMMENT ON THIS AND THAT

California Medical Association Roster in This Issue.—In order to eliminate an expense of several thousand dollars which the printing of an elaborate California Medical Association directory such as that of 1930 would entail, the Council has ordered a roster prepared which could be printed in the official journal. It will be found in this issue on page 204.

This roster or directory has been arranged so that the residence city or town of each member is indicated and, through a key number, his county society. Additional information concerning school and year of graduation is easily obtained by

reference to the "Directory of the California State Board of Medical Examiners," a copy of which is mailed each year to every physician licensed in California. The back edge of the cover of this issue of CALIFORNIA AND WESTERN MEDICINE contains the words "Roster Number" in order that it may be more easily found in your JOURNAL files. If you do not keep your JOURNALS, it may be well to place this March number aside for future use.

* * *

Del Monte Annual Session.—The sixty-second annual session of the California Medical Association will convene at the Hotel Del Monte, Del Monte, on Monday, April 24. All indications point to a successful meeting. This issue of CALIFORNIA AND WESTERN MEDICINE, page 195, prints the hotel rates. If you contemplate being in attendance, it would be wise to make a reservation for hotel accommodations. Otherwise, in case of a large attendance, if you wait until the last minute, it might be necessary to secure accommodations in Monterey, which, charming place though it is, is nevertheless not quite so convenient as the Hotel Del Monte itself. A list of Monterey hotels will be printed in the April CALIFORNIA AND WESTERN MEDICINE.

All members who can arrange to attend are urged to make an effort to do so. In addition to the inspiration that will come from the excellent scientific papers, and the good fellowship always incident to meeting one's fellows from other portions of California, there is this year a special reason for attendance, namely, the need of interchange of opinion on many of the economic problems now before the medical profession for solution. Some of these are peculiar to California and can be worked out only by members of the California medical profession. Try to arrange, therefore, so you may be among those present. The session begins on Monday, April 24, and closes on Thursday, April 27. The program of the Del Monte Annual Session and the "Pre-Convention Bulletin" will be printed in the April CALIFORNIA AND WESTERN MEDICINE.

* * *

Some California Maps.—The February issue of CALIFORNIA AND WESTERN MEDICINE, page 137, printed two maps that are worthy of study. Those maps are referred to at this time because the California Legislature is in session. Elsewhere in this issue appear comments on the large amount of prospective legislation before our law makers at Sacramento. A reference to the county population table on page 136 of the February CALIFORNIA AND WESTERN MEDICINE (and on page 202 of this issue) suggests some interesting thoughts. Note for instance that Senatorial District No. 1 consists of Modoc County (population 8038), Lassen County (population 12,589) and Plumas County (population 7913). These three counties, with a total population of 28,540, have one of the forty state senators. Los Angeles County, with a population of 2,208,492, also has one lone state senator. (In the last California reapportionment the senatorial districts were

mapped out along geographical lines, whereas the assembly districts are based on population.) Take now Assembly District No. 2, which, in order to secure one assemblyman, needs not only the counties of Modoc, Lassen and Plumas above referred to, but the additional counties of Siskiyou, Shasta, Trinity and Sierra to secure a population sufficient to be represented by one assemblyman. Los Angeles County, by contrast, has a total of thirty assemblymen to represent its greater population.

The significance of these facts, when considered from the standpoint of public health legislation, are these: that if active county medical societies everywhere are in operation throughout California, it is possible for the county societies located in counties with lesser population to be at times quite as powerful in support of public health measures as counties with large metropolitan centers. If the big city counties have a large number of assemblymen, the smaller agricultural and mining counties have perhaps a slightly greater influence in the state senate. And every law must first be sanctioned by both senate and assembly. It is to be remembered, also, that in a small county or group of small counties, as represented by one state senator, that the physicians of such counties as a rule have far greater influence with their state senator than do the physicians in counties with large cities.

Which prompts us to call the attention of our readers to the fact that this March number of CALIFORNIA AND WESTERN MEDICINE reprints the map of the state senatorial districts, and also a companion map showing the location of the county societies which make up the California Medical Association. We have used as our designation numbers in the county areas the key numbers used in the roster set-up of this issue. The editor has also indicated the counties in which the California Medical Association has no county societies (either individual or group). Such a map should be of service in the determination of future membership policies and organization efforts. In any event, it permits an easier visualization of the present county organization status of the California Medical Association. For map and table, see pages 203, 204.

* * *

Alpine County a Small County.—In the foregoing, reference was made to the list of California counties on page 136 of the February CALIFORNIA AND WESTERN MEDICINE. In that list the fifty-eighth or smallest county is that of Alpine. In preparing the table printed in the February issue of CALIFORNIA AND WESTERN MEDICINE, the editor found he did not have the information he desired regarding Alpine County. He accordingly wrote to the secretary of the California Board of Medical Examiners for information. Dr. Pinkham's interesting reply follows:

"Our records do not show that there are any doctors located in Alpine County, which is one of the smallest counties in the state in area and in population.

"The 'Survey Index of the State of California,' published by the Heald-Menerey Company, Inc.,

states that Alpine 'has one of the smallest populations of any county in the United States.' The 1920 census showed it had a population of 117 native whites and twenty-four foreign born, the latter being mostly from Germany and France. It is entirely without railroad or boat transportation, and the only industry is farming."

* * *

California Medical Association Prize Essays.—In every issue of CALIFORNIA AND WESTERN MEDICINE, on advertising page 2, is printed the announcement of the two prizes of \$150 each which are annually awarded by the California Medical Association for the two best clinical and research papers. Any paper presented at an annual session may be entered for these prizes. On request, complete information will be given by the association secretary. It is hoped that the large number of papers presented at last year's annual session will be more than equaled by this year's entries. If you are at all interested in entering your paper, write at once to the association secretary. All correspondence is held as confidential and only the names of the successful essayists are ever given publicity.

Roentgen Irradiation and Suggestion in Treatment of Warts.—According to Lenk, roentgen irradiation is now one of the most widely employed procedures in the treatment of warts, particularly when they are disseminated and operative removal is difficult. The verrucae planae juveniles have been found to respond somewhat more readily than the verrucae vulgares. The author also points out that the favorable results of roentgen irradiation have almost been equaled by the results of suggestion therapy. For this reason he decided to investigate whether the results of roentgen treatment may not be largely due to suggestion. In summing up his observations he states that in evaluating the efficacy of roentgen rays or of suggestion, respectively, it is necessary to differentiate between verrucae vulgares and verrucae planae juveniles because, whereas simulated irradiation was never effective in the first type of warts, it did produce a considerable percentage of cures in the second type. The author emphasizes the fact that the simulated irradiations were given without any verbal suggestion whatever. Most cases of verrucae vulgares could be counteracted with real roentgen treatments and, although a considerable percentage of verrucae planae juveniles yielded to simulated irradiation, that is, to suggestion, the majority nevertheless responded better to real roentgen irradiation.—*Wiener Klin. Wochenschrift*.

Operations on Ocular Muscles.—The need of utilizing all the means which ophthalmology puts at one's disposal for the correction of muscular anomalies is summarized by Jameson in the following phases of the subject: 1. Recognition of the causes of squint and diligent efforts to obtain an intimate understanding of them. 2. Careful computation and gradation based not on deviation alone, but on all the underlying factors. 3. The consideration of reduction in muscular strength by true relaxation and also by the induction of hypertension, and the utilization of these factors to the best advantage. 4. The selection of the operative procedure best adapted to the existing conditions, with careful weighing and evaluation of effects. 5. The giving of the same requisites of scleral fixation and gradation to tenotomy as to advancement. 6. The appropriate use of the principles of ligated sutures, careful unmutilated dissection of muscles and supplementary capsular adjustment for both advancement and recession. 7. The postoperative care that combats inflammatory reaction. He believes that the practice of these principles will add much to security and stabilization in operations on the ocular muscles.—*Archives of Ophthalmology*.

EDITORIAL COMMENT

This department of California and Western Medicine presents editorial comment by contributing members on items of medical progress, science and practice, and on topics from recent medical books or journals. An invitation is extended to every member of the California and Nevada Medical Associations to submit brief editorial discussions suitable for publication in this department. No presentation should be over five hundred words in length.

Effect of Altitude on Drug Action.—For some time empirical observation has suggested differences in drug effects due to altitude. Recently Dr. A. J. Lehman and Dr. P. J. Hanzlik of the Pharmacological Laboratory of Stanford University Medical School have furnished definite experimental evidence of a significant effect of altitude on the action of digitalis.¹ Their study has been so carefully made that there is no doubt at all regarding the validity of their conclusions: "The emetic and fatal doses of digitalis in significant numbers of pigeons were found to be 40 and 22 per cent less, respectively, at an altitude of 10,000 feet than at sea-level. A similar tendency was shown by the extremes in fatal doses for cats, but the results were inconclusive, due probably to greater variations in cats and smaller numbers used. The higher potency of digitalis at high altitudes reflects changes in state of the emetic and circulatory functions at high levels and indicates the desirability of reducing the dosage of the drug at high levels so as to avoid undesirable and toxic reactions."

Whether or not these findings, with regard to digitalis, apply to other drugs is not known with certainty, but it is very likely that any drug, if action is mediated in part by circulation or respiration, will be found to be similarly affected by altitude. These observations would seem to be of considerable significance in California, where great variations in altitude may be found in a relatively restricted area.

Clinical studies on this problem are desirable, and it remains to be determined whether or not acclimatization may alter the tendency indicated by the work of the Stanford investigators.

Department of Pharmacology,
University of California.

C. D. LEAKE,
San Francisco.

II*

The Growing Complexities of Allergic Theory.—Conventional allergic diagnosis and antiallergic "desensitization" are based on the implied theory that each and every natural alien biological product is an antigenic unit and that it produces qualitatively identical allergic reactions in all organs and tissues of the same hypersensitive individual. As a corollary to this implied theory, the intracutaneous injection of a pollen extract, for example, is a logical diag-

nostic method to determine the specific pollen causing the internal allergic symptoms, and subcutaneous injections of this extract is the logical counterimmunizing technique. This conventional logic is today challenged by laboratory research.

Biochemical fractionation has demonstrated that all natural plant, animal and microbic products thus far studied are polyvalent allergic excitants, complex mixtures of type-specific, species-specific, genus-specific, and relatively nonspecific, lipoids, carbohydrates and biological colloids. These presumably monovalent fractions are often of widely different taxonomic distribution in nature.

Of equal clinical significance is the recent demonstration that the different organs and tissues of the same individual are not of the same biological specificity. Organ-specific proteins in the eye, in the thyroid gland and the kidney, for example, have been alleged and confirmed by numerous investigators, as well as organ-specific lipoids in the brain, kidney, and liver. There is the suggested possibility of organ-specific carbohydrates. Although such data are as yet too few for a detailed clinical theory, no clinical allergist dare longer assume that the basic specificity of the skin is necessarily identical with that of the bronchial musculature, nor that this musculature, in turn, is immunochemically identical with other internal tissues.

These presumptive organ-specific differences throw doubt on the conventional theory that allergic reactivity is qualitatively the same in all tissues of the same individual. Local reactivity is conceivably against the "specificity differential" between the extraneous agent and the local cells. The "allergic skin differential" of a given pollen may well be qualitatively different from its dominant reacting fraction or differential in the lungs. If so, skin reactivity and bronchial reactivity are no longer necessarily qualitatively parallel.

A lack of invariably reliable diagnostic parallelism between the skin test and internal symptomatology has long been recognized by professional allergists.¹ Recent tissue analyses merely suggest a plausible explanation for this seeming physiological paradox.

Recognition of the multivalent nature of natural biological products has suggested a conceivable undesirable "therapeutic vicious circle" in routine "desensitization" techniques. It is alleged that relatively few patients are equally hypersensitive to the globulin and albumen fraction of the same pollen.² Theoretically, therefore, the

¹ Lehman, A. J., and Hanzlik, P. J.: *Proc. Soc. Exper. Biol. Med.*, 30:140-143 (Nov.), 1932.

* Part I of this series was printed in the February California and Western Medicine, page 116.

¹ Feinberg, S. M.: *J. A. M. A.*, 95:1665, 1930.

² Rappaport, B. F., and Johnson, C. A.: *Proc. Soc. Exper. Biol. and Med.*, 46:771, 1929.

offending pollen factor might be a species-specific protein, with no simultaneous hypersensitivity to the accompanying genus-specific, family-specific or relatively nonspecific plant products. Modern theorists are wondering if the injection of such collateral fractions to which the patient is not already hypersensitive, may not in time lead to the development of a collateral sensitivity to other plant species, thus inadvertently increasing the patient's environmental handicap. While this is solely a speculative fantasy, it is not entirely foreign to reported clinical experience.

Stanford University.

W. H. MANWARING,
Palo Alto.

(To Be Continued)

Hospitals: Association's Right to Benefits of Mechanic's Lien.—Remington's Compiled Statutes, Washington, Section 10320, authorizes a municipal corporation, which has contracted for the erection of designated public works, to retain a certain percentage of the moneys due the contractor "as a trust fund for the protection and payment of any person or persons, mechanic, subcontractor or material-man who shall perform any labor upon such contract or the doing of said work, and all persons who shall supply such person or persons or subcontractors with provisions and supplies for the carrying on of such work." The plaintiff hospital association contracted to furnish the medical, surgical, hospital and ambulance service, and first aid kits for the treatment of workmen injured in erecting a certain public work. The plaintiff, said the Supreme Court of Washington, is not entitled to the benefits of the statute quoted. While a mechanic's lien is a favorite of the law, the statute creating it cannot be so extended as to apply to cases which do not fall within its provisions. By no liberality of construction can it be said that, under the statute quoted, a physician or surgeon treating medically or surgically a laborer employed on the work would himself be a laborer; or that medicine, drugs, apparatus or bandages used in the performance of an operation would be "provisions" or "supplies" for the carrying on of such work. The services of the hospital, with its first aid attendants, x-ray machines, nurses and paraphernalia cannot be considered as "provisions" or "supplies" furnished to contractors or subcontractors for carrying on their work, in the absence of specific statutory authorization justifying that construction.—*Western Clinic & Hospital Association vs. Gabriel Construction Company* (Washington), 12 P. (2d) 417.

Electrocoagulation of Tonsils.—According to Balmer, the control of tonsillar bleeding in accordance with the basic principles of general surgery, is essential in the removal of tonsils. Faulty operative position and lack of a definite precise technic are greatly responsible for the majority of unsatisfactory post-operative results in tonsillectomy. The author's technic is as follows. The tonsil is swabbed with a 1:1000 epinephrin solution. The surface of the tonsil and the interior of the crypts are swabbed with a small amount of cocain hydrochlorid flake by means of a fine applicator tipped with cotton and moistened with a 1:6000 epinephrin solution and the excess of moisture squeezed out. This is repeated two or three times at two or three minute intervals. The electrocoagulation apparatus is employed, the meter reading about 3,000 milliamperes with the spark gaps slightly open. This will give a reading of from 250 to 300 milliamperes with the patient in the circuit. The indifferent electrode is connected to the metal chair on which the patient is seated. The proper needle is inserted into the tonsil substance approximately 4 millimeters; it should be kept about 4 or 5 millimeters away from the peripheral structures; sparking and

surface fulguration should be avoided and the point should be directed toward the center of the fossa. In from one to three seconds a blanched area will appear around the needle. This process is repeated as many times as is necessary, usually from six to ten contacts. A small area of unblanched tissue, which is left between the punctures, allows the coagulated areas to coalesce and prevents overcoagulation and the possibility of too early separation of the coagulum. Bleeding points may be controlled by sparking the area. Electrosurgery, and electrocoagulation in particular, do not replace surgery in the removal of tonsils. They are better suited to selected cases. The combination of surgery and electrosurgery is the ideal method. Surgery will continue to be the method of choice; when it is contraindicated, electrosurgery may be considered as an appropriate and scientific aid to ordinary surgery. The surgeon should not be limited by lack of ability, knowledge, equipment or prejudice. There are many contraindications to electrocoagulation. Diathermoelectrocoagulation, or removal of the cryptic portion of the tonsil, is a commendable, worthwhile procedure to be considered under circumstances in which a more conservative procedure is required. Electrocoagulation is a safe, ultraconservative procedure, requiring time, judgment, technical skill, patience and meticulous care.—*Northwest Medicine*.

Syphilis and Thyroid Disease.—Netherton reviews the literature relating to the association of syphilis and thyroid disease and analyzes sixty-two cases of this kind in an effort to evaluate the importance of syphilis as an etiologic factor in the production of thyroid dysfunction. He reports three cases in which syphilis produced a symptom complex which simulated that of hyperthyroidism and he expresses the opinion that some of the cases reported in the literature are of this type. A case of probable gumma of the thyroid is also reported. A careful examination to rule out neurosyphilis should be made in such cases. The author concludes that antisyphilitic treatment should not replace surgical intervention in cases of active hyperthyroidism in syphilitic individuals, as operation followed by antisyphilitic therapy will prevent the cardiac damage that may result from unnecessary delay. Syphilis does not interfere with the convalescence in these cases. Preoperative treatment is advisable but should not be too intensive. Patients having neurosyphilis associated with hyperthyroidism are poor surgical risks, especially if there is mental deterioration. Preoperative antisyphilitic treatment in these cases is indicated, as it is of definite value in case of tabes dorsalis.—*American Journal of Syphilology*.

Food Tables.—Manville and Winchell present food tables giving the excess acid or base of foods. They state that foods may be classed into three main groups: excess acid-ash foods, consisting of meat, fish and cereals, some nuts, such as walnuts and peanuts, and some fruits, such as plums, prunes and cranberries; excess alkaline-ash foods, consisting of most fruits, most vegetables, milk and some nuts, such as almonds; and neutral food, consisting of butter, cornstarch, cream and, in general, most cooking fats and oils, and pure carbohydrates, such as sugar and tapioca. Those foods having the lowest buffer values are the cereals; those of intermediate value are the fruits and vegetables, while those having the highest values are the flesh foods. Notice should also be taken of the fact that cooking reduces the buffer value to as much as one-third of its raw value. The use of the acid-base foods will generally lie in those dietotherapeutic regimens in which dehydration is desired, as, for example, in epilepsy, nephritis with edema and obesity. Buffer value foods are useful in the dietary care of persons suffering from an excess or from a deficiency of hydrochloric acid in the stomach. They are also of value in the supervision of the dietaries of young children whose gastric acidity has not yet reached that of the adult.—*Northwest Medicine*.

C. M. A. DEPARTMENT OF PUBLIC RELATIONS

An open forum for progress notes on the department's activities, and for brief discussions on medical economics. Correspondence and suggestions invited. Address Walter M. Dickie, Room 2039, Four Fifty Sutter Street, San Francisco. This column is conducted by the Director of the Department.

Practical Group Hospital Insurance*

The present broad application of the group hospitalization plan was initiated by the Baylor University Hospital in Dallas, Texas, almost three years ago. Although some forms of hospital insurance had been in effect for a longer period in various parts of the country, they were not so broadly applied as in Dallas. It was felt that the only way to determine the soundness and the feasibility of such a plan was to go to Texas and investigate its merits at first hand. Accordingly, the trip to Dallas and the investigation were undertaken, and first hand information was obtained.

The plan in operation at Baylor University Hospital assures hospital service when needed in a \$5 private or two-bed room, operating room, anesthetic, laboratory examinations, medical and surgical dressings, hypodermic and all usual hospital service of undergraduate nurses, nurse supervisors, interns and house staff, during the period of hospitalization not to exceed twenty-one days. In case the assured party should necessarily be hospitalized more than twenty-one days, then he shall be entitled to a discount of 33½ per cent from the regular fees after the first twenty-one days. Plan does not include doctor's visits, either physician or surgeon, nor the service of a special private nurse, nor board for special nurse, nor x-ray work. If the higher priced room is desired it would apply as a credit of \$5 a day on the cost of such higher priced room. The benefits do not apply in the case of purposely self-inflicted injury or obstetrical cases, but in such cases the assured shall be entitled hereunder to a 50 per cent reduction on regular hospital fees. Except for preliminary hospitalization pending diagnosis, the hospital is not prepared to care for and does not accept cases of pulmonary tuberculosis or chronic mental and nervous disorders, or virulent contagions, such as smallpox, etc. All such cases need treatment in special hospitals.

In case of epidemic, public disaster, or other conditions occasioning an overcrowding of the capacity of the hospital to such a degree that it is not possible to provide accommodations, and in case adequate accommodations cannot be secured elsewhere in the city, then in the face of such emergency it is agreed that the responsibility of the hospital under this contract shall be discharged by the refund to the assured of twice the amount that has been paid by the assured under this contract during the twelve months immediately preceding, and such payment shall constitute a full and final discharge of the obligations of the hospital hereunder. (On most days the hospital could handle an emergency additional load of seventy-five to one hundred, so there was no probability that such a necessity would occur.)

All members of the Dallas County Medical Society are eligible to use the facilities of Baylor University Hospital, and no patient can be admitted to Baylor University Hospital except under care and upon authorization of some member of the Dallas County Medical Society.

The benefits of the plan do not apply if the member is released or discharged from an employed group. Fees must be collected and paid as a group. Personal identification must be made by some authorized representative of the employer. This hospital originated the plan after serious research and study of all avail-

able facts, and it was first applied to teachers in the public schools of Dallas and Dallas County—about 1500. After the first year it was found that this group of employed persons presented an actuarial experience not profitable to the hospital. Reasons given were that the teachers were unemployed for two months of a year, and during that period had ample time to avail themselves of hospitalization for treatment of illnesses arising from the exacting demands of their profession. Applied on a broader basis, however, which included employees from all industrial and office groups, it has proved to be decidedly successful. The actuarial experience of this hospital was found to represent a proportion of less than 7 per cent of the total persons insured to date. In other words, less than 7 per cent of those so insured to date under this plan were treated at the hospital. Their average length of stay was three plus days, and the average income was close to \$7 per day.

It was learned that at the beginning of the operation of this plan the hospital had available 156 beds, and after three years of operation with the plan, these beds are filled practically all the time. Some large wards have been reconstructed to provide such private rooms largely for the purpose of meeting the demand of insured patients. At this hospital it was learned that this plan unquestionably had increased the volume of business and, more important, substantially increased their proportion of income. The average cost per patient at this hospital last year was \$5.11, and it is interesting to note that it operates on a self-supporting basis, having no endowment and no municipal support and receiving no income from any denominational group. It is not intended to convey the idea that the progress of this hospital during the past three years, as indicated in the paragraph above, was entirely due to the income from its insured groups. However, the superintendent emphasizes that this source of income has been a contributing factor of marked importance.

The business manager of a hospital informed me that at all times sufficient funds were available from monthly fees to meet the charges as they were incurred. He also estimated that if these patients had not been enrolled in the insurance plan the hospital would not have been able to collect more than 50 per cent of the cost of the care given.

At the time of the investigation, 6442 were members of the plan at this hospital. This hospital has definitely adhered to the policy of dealing directly with the group, through the employer or other representative, and has never employed any outside selling organization or middle-man representative.

The Dallas Methodist Hospital and the Fort Worth Methodist Hospital also were visited. Both were enthusiastic about the merits of the plan. In both instances there had been no period in which the funds available had not been sufficient to meet the hospital charges incurred by the members of the plan. Analysis of the hospital's financial records revealed the marked benefits which have come as a direct result of its operation. The director at the Dallas Methodist Hospital stated that in his opinion the benefits derived from the plan had enabled the hospital to operate without deficit, although they were in a serious financial plight before the plan was adopted.

It was interesting to compare the rates charged by both hospitals in Dallas, because the Baylor University Hospital employs no selling organization. The rate at that hospital is \$6 per year, or 50 cents per month. One exception is that of a group of

* By Frank Van Dyk, M. D., executive secretary of the Hospital Council of Essex County, Newark, New Jersey, in *American Hospital Association Bulletin*, January, 1933.

school teachers for whom the plan was first adopted. It was found that because this group represented an actuarial experience unprofitable to the hospital the rates have recently been raised to \$8 per year.

The Dallas Methodist Hospital charges \$9 per year or 75 cents per month, of which \$3 per year or 25 cents per month is retained by the selling organization. This means that the hospital nets an amount similar to that received by the Baylor University Hospital. The number enrolled under the plan at this hospital now is in excess of 6000, making a total of more than 12,000 in the city of Dallas.

The Dallas Methodist Hospital, although charging 75 cents per month, has experienced no difficulty in selling membership in the plan through the selling organization it employs. Several reasons are indicated why no sales resistance up to this point has been encountered because of the higher rate. They are enumerated as follows:

1. The sales organization is constantly active in the endeavor to increase membership.
2. Baylor only occasionally presents the opportunity to join to carefully selected groups.
3. Baylor does not accept every group of employees, while the Methodist Hospital is willing to accept groups which have been declined by Baylor.
4. Individuals are accepted by the Methodist Hospital, but not at Baylor.
5. The individual preference is for Methodist Hospital.
6. Methodist Hospital offers a contract which is presented to the individual and a patient is recognized as an individual rather than as a member of a group.

Baylor Hospital exercises great care in selecting groups to whom the insurance plan is offered. Employees who are underpaid and overworked are not considered good risks and applications are not solicited from such groups. No individuals are solicited or accepted at the hospital. An insured person must be a member of a group where identification is made by some authorized representative of the employer.

There are evidences in the community that this policy was not favorably received in some instances. The impression gained is that an insured person wants to be recognized as an individual and not as a unit of a group.

This hospital has not had any unpleasant or unsatisfactory reactions from its staff doctors, the patients, or from the public generally. It has now operated this plan for three years, and during this entire period there has been a constant increase in the number of persons insured and consequently a constantly increasing and profitable volume of business. No group of employees has decreased its number of insured members, but on the contrary there has been a growing number of those who have availed themselves of the benefits of this plan.

Although every member insured at this hospital pays a rate of 50 cents per month, all do not receive the same accommodations. Employees of the so-called lower classes, such as laborers, porters, etc., are given hospital treatment in ward beds at the rate of \$3 per day. This discrimination has led to some criticism in the community. One employer group refused to join this hospital's insurance plan on that account and made application at the other hospital operating a similar plan without discrimination of type of accommodations.

It is evident that this arrangement, while perhaps desired from some viewpoints, does not contribute to a wholehearted approval on the part of the public.

At Baylor University Hospital no allowances are made for x-rays, but at the Dallas Methodist Hospital a 50 per cent discount is allowed.

Payments of fees may be made monthly, quarterly, semiannually or annually. The annual payment is \$6 per year at this hospital.

Dr. J. H. Groseclose of the Dallas Methodist Hospital has pointed out the interesting and significant fact that while this plan unquestionably tended to increase utilization of capacity, the increased cost of the greater care rendered was small in comparison

to the income. In other words, there was but little increase in overhead cost, yet the income was beyond full cost and thus substantial in comparison to the slightly increased cost of operation.

This hospital has an arrangement with an organization to handle the solicitation of applications, collections of fees, and the clerical work necessary to the operation of the plan. The hospital administrators are thoroughly satisfied with the arrangement and said there was no other way in which they could handle this work satisfactorily.

FORT WORTH METHODIST HOSPITAL

This hospital experimented with this plan last year, applying it only to school teachers. The result was not wholly satisfactory for the same reason as explained by Baylor Hospital. The hospital administrators first carried on this work without the assistance of the outside representatives but abandoned the idea of promoting the program themselves. Mr. C. Q. Smith, the superintendent, explained the reason therefor as follows: "First, we could see a mass of details in the future should a large membership be secured; second, we decided that the program is one of a sales proposition and requires the service of trained efficient salesmen if the maximum results are to be obtained. We feel that our job is to run a hospital, which, if properly done, consumes absolutely all of our time, and we do not have sufficient time to develop the hospitalization program as we feel it should be developed."

Since the beginning of this year outside help has been employed and the experience so far this year with but a few hundred members has proved profitable to the hospital. New applications are being received at the rate of approximately four hundred per month.

It is significant to note that the experience of this hospital with a few hundred insured persons has proved of profit to the hospital.

SUMMARY OF EXPERIENCE IN DALLAS AND FORT WORTH

In Dallas more than 12,000 persons are members of the group hospitalization plan.

Hospitals have increased utilization of capacity as a result of the plan.

The ratio of income per patient has increased despite the depression.

The number of insured persons is increasing rapidly.

The hospitals' experience indicates the work of promoting the plan should be carried on by some trained sales representative devoting exclusive time to his work.

Both employers and employees endorse the plan.

The medical profession generally has endorsed the plan because it enhances the opportunity to collect fees. There the one reservation is that in some instances it interferes with individual practice because hospitals operate the plan individually.

There should be no discrimination in providing type of accommodations for patients when all members pay similar fees.

Not only have hospitals benefited materially in a financial way, but the plan has increased the education of the public in regard to hospitalization.

Solicitation of applications should be confined to groups and individuals' applications should not be solicited except in a large measure so as to represent the average population. Members of the plan should be considered individually and so admitted to hospital rather than as a unit of a group, requiring identification of an employer. Otherwise, public reaction is indicated to be unfavorable.

The law of averages relative to persons requiring hospital care has applied to small numbers of groups as well as large numbers. This is not indicated, however, in small numbers of individuals.

Should one or more hospitals adopt this plan and others in the same community decline, hospitals with the plan will be favored and obtain a greater and more profitable volume of business at the expense of other hospitals not operating the plan.

Aside from the benefits to the hospital already indicated, advantages only possible by a joint operation of the plan by all hospitals in the community are enumerated as follows:

1. It would provide the opportunity for members of the plan to go to the hospital of their choice, thus creating no change from the present situation regarding selection of hospitals. In case of accident the injured member could be brought to the nearest hospital with full assurance that he could obtain full advantage of the plan.

2. It would avoid unfair competition should one or a few hospitals offer care under this plan.

3. There would be no interference with the practice of any physician or surgeon.

4. Remittances by employed groups would go into one fund rather than into several if operated individually. This would avoid confusion and annoyance on the part of employers or those who collect the receipts.

5. Sales resistance would be materially lowered due to the fact that there would be no compulsion to accept service in a hospital not of their choice.

6. The hospital would not be required to expend any effort other than to receive and care for the patient after identity was established, and receive prompt remittance of the established charges.

As a result of our investigation and study the following points of benefit to the hospital and the public are indicated and summarized:

1. It enables employed persons of average means to be assured of adequate hospital care at no other cost than a monthly payment which averages no more than the cost of a newspaper a day.

2. It enables them to obtain the scientific advantages of hospital service at an early stage of illness and thus avoid advance of illness to a degree where intensive hospitalization or medical care is required.

3. It avoids the necessity of the patient's going into debt, or accepting charity service.

4. It enables him to retain his self-respect and saves him from the spectre of financial insecurity.

5. It enables the hospital to place its financial structure on a more permanent basis.

6. It tends to increase occupancy of private accommodations.

7. It yields an income in excess of the cost of care.

8. It enables the hospital to admit to private accommodations many persons who otherwise would receive ward service.

9. It preserves the independent practice of medicine and enables the doctor to establish and maintain private relationship between the patient and himself.

10. It enables the doctor to have the advantage of hospitals' scientific facilities which otherwise might not be obtained because of the inability of the patient to pay for such service.

11. It enables the doctor to collect his fees more readily.

12. It also enables the doctor to retain many of his patients who might otherwise be lost to him, because of their inability to pay for private hospital service.

* * *

Resolution Adopted by the Kern County Medical Society

WHEREAS, There has recently been released for publication a report by a national committee appointed to investigate the costs of medical care; and

WHEREAS, The majority report of that committee recommends the adoption of a plan whereby the expenses of medical care would be partially or wholly defrayed by taxation; and

WHEREAS, It is customary for the regular medical profession to donate their services in caring for the indigent sick, which service is obviously not an obligation of the doctors but is clearly a duty of the state; and

WHEREAS, The use of taxation to finance any system of medical care would, inevitably, lead to political domination, with its corollaries, favoritism and inefficiency; and

WHEREAS, Years of experience have demonstrated that a salary basis of compensation for the physician leads, without exception to the loss of that confidential relationship between doctor and patient and without which successful treatment is frequently impossible; and

WHEREAS, The use of state funds to partially or completely defray the costs of medical care of the small wage earner, while taking no cognizance of his more elemental requirements such as food, clothing and housing seems unreasonable, inconsistent, and constitutes, in fact, class legislation; and

WHEREAS, The principal minority report of said committee, signed entirely by physicians in active practice, representing the opinion of men who have learned their facts first hand and are, therefore, in a position to give more practical advice, has been approved by the American Medical Association; now, therefore, be it

Resolved, That this society does hereby endorse the principal minority report of said committee, which, among others, makes the following recommendations:

1. That government competition in the practice of medicine be discontinued.

2. That government care of indigents be expanded with the ultimate object of relieving the medical profession of that burden.

3. That united attempts be made to restore the general practitioner to the central place in medical practice.

4. That any plan involving a change in present methods of medical practice be rejected unless proved capable of being fitted into present institutions and agencies.

In its Medical Economics department, the *Journal of the American Medical Association* of February 4 takes up the subject of its twelfth discussion, "The Health Preservation Foundation of Los Angeles." The comments of the *Journal of the American Medical Association* thereon are here reprinted:

The merits of the plan are:

1. Insistence on membership in medical and dental associations insures a fairly high standard of service and professional ethics.

2. It will provide medical service for low income groups with less financial burden to the patients and greater security of at least a limited payment to the practitioner.

3. It claims to insure freedom of choice of physicians within a comparatively large group.

4. According to the initial announcement, it would seem to avoid the evils of lay control and retain all the management within the medical profession.

Its principal defects are:

1. It tends to divide the membership of the county medical society and to create a preferred group controlling a section of the market for medical services secured through solicitation of members and their adherence to a contract.

2. Such a partial monopolization of any considerable section of the field for medical practice in any locality would be in the nature of "unfair competition" with those excluded, especially when such exclusion is not based on qualifications or the opinion of patients but on membership in a previously existing organization, and when the number of physicians admitted is so closely restricted.

3. It would be a miracle if such a situation did not result in divisions and controversy within the county medical society.

4. It aligns certain civic, charitable, social, business and industrial organizations with a selected percentage of the profession. The inclusion of this element, with the use of a "representative who is capable of contacting the lay individual of minimum income," forecasts the use of pressure and advertising as means of promotion.

Influenza Epidemic in England.—Deaths from influenza in England and Wales totaled 1041 the week preceding January 19, compared with 681 the previous week, newspapers reported. As a result of the spreading of the disease, all schools in Swansea were to have been closed, following similar action in other towns, it was stated.—*Journal of the American Medical Association*, January 28, 1933.

CANCER COMMISSION OF THE C. M. A.

The Cancer Commission was brought into being by the House of Delegates of the California Medical Association to aid in the furtherance of all efforts to combat cancer. The roster of officers and the central office of the Commission to which communications may be sent is printed in this issue of California and Western Medicine (see front cover directory). This column is conducted by the Secretaries of the Commission.

REPORT OF COMMITTEE ON EYE, EAR, NOSE AND THROAT TUMORS*

II

NOSE AND THROAT TUMORS

While in general certain well defined symptoms and signs exist in the diagnosis of malignancy of the nose and throat, biopsy is usually essential to avoid confusion with tuberculosis and leues. Blood counts and smears eliminate leukemia.

Following is a summary of the symptoms, diagnosis and treatment of the more common tumors of the nose and throat.

TUMORS OF THE NOSE AND ACCESSORY SINUSES

Benign Tumors.—The commonest benign growth of the nose is the ordinary so-called nasal polyp. This is an oval, smooth, pedunculated, gelatinous-appearing mass of varying size and contour, usually springing from the middle turbinate or paranasal sinuses. Frequently it is nothing more than edematous mucous membrane. The common symptoms are nasal obstruction, discharge, mouth breathing, cough, sneezing or asthma. It is easily diagnosed from its appearance or location, and the treatment is surgical removal. Accompanying sinusitis usually requires attention to prevent recurrence.

A number of less common benign neoplasms may be mentioned: (1) fibroma; (2) enchondroma. The committee regards these as best treated by surgical excision. (3) Angioma, presenting as a vascular, sessile excrescence on the septum. For this growth strangulation by cold snare and cautery, enucleation, or occasionally destruction by radium have been successful.

The benign tumors so far mentioned are not in any special sense precancerous.

One rare growth—epithelial papilloma—must be regarded as precancerous. It readily recurs after incomplete removal or destruction, and carcinoma has been observed to occur in the recurrences. Due to their small size, they produce few symptoms. It is recommended that they be excised and that the base after excision be cauterized or electrodesiccated.

Malignant Conditions.—Malignant tumors of the nasal passages include both sarcomas and carcinomas, (rarely endotheliomas).

1. The true sarcomas are stated by Ewing to be chiefly lymphosarcomas and myxosarcomas arising from the mucosa. Fibrosarcomas are reported; osteogenic sarcomas are rarely observed; and occasionally tumors presenting mixed tissues, chondromyxosarcomas, etc.) may be found.

2. Among the carcinomas are included a number of histological varieties presenting variations in clinical course and especially in radiosensitivity.

(a) Papillary carcinoma.

(b) Carcinoma resembling in histologic appearance the basal cell type seen on the skin, ordinarily of small growth and locally destructive, but seen eventually to present lymph gland metastases.

(c) Squamous cell carcinoma, behaving as this tumor does elsewhere in the body.

(d) Cylindrical cell carcinoma, which may be of adenocarcinomatous form, usually highly malignant.

(e) Round cell carcinoma. This variety doubtless includes many tumors which are diagnosed sarcoma. Such tumors are of a high degree of malignancy and are quite radiosensitive.

3. Endothelioma may rarely occur, is of low radiosensitivity, but rather slowly growing and late to metastasize, but invading bone and so occasionally leading to intracranial involvement.

Diagnosis.—The early symptoms of new growths are those of inflammation. Any of these malignant tumors may first call attention to themselves by purulent discharge (especially, persistent unilateral discharge), epistaxis, or later by tension or neuralgic pain. These symptoms, of course, are not pathognomonic of neoplasm. They may and do commonly arise from chronic inflammatory processes or from the presence of benign tumors. Later, symptoms more definitely diagnostic of new growth are: deformity, swelling of the walls of the sinus into the nose or mouth or orbit or cheek; or, still later, destruction of the walls, ulceration, and metastases. The generally poor prognosis of nasal tumors is in all probability due to the fact that diagnosis is not made until these later signs appear. It is important, therefore, that investigation for the positive presence of tumor be made of suspected areas, giving attention to earlier signs, namely, nasal discharge, epistaxis and neuralgic pain, to which should be added loosening of the upper teeth, occasionally suggesting an adamantine tumor as well as cancer of the antrum with extension through the floor.

The committee is unanimous that biopsy should be taken in all suspected cases, always remembering that it is very easy to include in biopsy only overlying granulation tissue, and so, fail in the diagnosis of a tumor. Furthermore, any nose or throat tissue removed at an operation should have histological examination.

The committee recommends that sinus x-rays be taken in all suspected cases. In elderly persons, increased unilateral density is suggestive but is not diagnostic of cancer unless bony walls are eroded. Trocar biopsy may be used if the growth has eroded into the mouth or nose. If not, a puncture may be made under the lower turbinate through the medial antral wall and a specimen obtained. Should this fail an opening in the canine fossa permits biopsy, radium insertion if positive and the subsequent surgical cleanup by enlarging it if desired. Early biopsy is preferred to waiting for evidence of bony erosion as this last means a well advanced case.

Treatment.—For any malignancy of the nasal passages, complete surgical removal is the ideal treatment. When diagnosis has been made sufficiently early so that the chance for successful surgical excision is good, this should be the aim. Many, perhaps most, malignant tumors of the nose are radiosensitive in greater or less degree. In line with the plan of attack recommended for many malignancies elsewhere, the committee recommends preliminary external irradiation in all cases, surgery (including cautery and electrocoagulation methods) in operable cases, radiation therapy in inoperable.

The committee strongly urges that irradiation, including dosage and method selected (x-ray, external radium, interstitial radium), be planned as accurately as is surgery and should be attempted only by those specially trained and experienced.

* Part I of this Report, dealing with tumors of the eye, was printed in the February CALIFORNIA AND WESTERN MEDICINE, page 122.

Lymph-gland Metastases.—In the case of tumors with recurrences or with tendency to metastasize, it is believed that the neck should be irradiated in all cases; and that when the primary tumor has been eradicated or when there is reasonable hope of so doing, palpable neck glands demand surgical neck dissection with or without irradiation. Metastasis in cancer of the antrum is rare. In the presence of intractable and incurable tumors, the possibility of relief by injection or section of sensory nerves should be borne in mind.

MALIGNANT TUMORS OF THE TONSIL AND PHARYNX

Epidermoid carcinoma is by far the commonest tumor of this region (five to one), the majority of these tumors having well recognized squamous features. It may arise from the soft palate, pillars, tonsil—in fact, from any mucous membrane. There is, however, also a fairly large group of carcinomas (transitional cell carcinoma and "lympho-epithelioma") in which the epidermoid features are well nigh absent or entirely lacking. Neither give rise to local pain early. The definite squamous type grows with rapidity and ulcerates, giving pain and bleeding. These have the appearance of squamous carcinoma of any mucous membrane.

In the other group (transitional cell carcinoma), the growth of the primary tumor is slow but metastasis occurs very early; bleeding and ulceration are late, and frequently the earliest symptom of any trouble is enlarged cervical glands. Therefore, any case with enlarged cervical glands should have a thorough nose and throat examination, remembering that the primary tumor may be so small and insignificant as to avoid detection. This type also frequently gives rise to bony and visceral metastases. It must be remembered that tumors of the nasopharynx most frequently do not give rise to local symptoms, but to symptoms which may be referred to the eye or ear or to neuralgic pains over the distribution of the fifth nerve. Practically all these tumors are sensitive to radiation although the histologic picture may not bear out that assumption.

Lymphosarcoma is a common tumor also, presenting the same clinical course when encountered here as elsewhere and equally sensitive to radiation. Palliation of symptoms and prolongation of life may be obtained, but seldom, if ever, a cure.

In examining for tumors in this region, palpation of the tonsillar fossae and the nasopharynx with the finger often gives valuable information. A tumor may sometimes be felt when it can be seen only with difficulty. Palpation is especially valuable to the general practitioner not versed in the use of mirror and endoscopes.

Treatment.—The fact that all of these tumors are sensitive to radiation suggests that it must be a prominent feature in the treatment. Surgical removal because of location in most instances is out of the question. External radiation, interstitial radiation and coagulation or cauterization, with proper case selection, have all been used with benefit. It must be remembered that hemorrhage following treatment of the primary lesion is a great possibility and so, ligation of the external carotid artery may be necessary.

For the cervical nodes, external radiation should always be given and this will usually give some indication as to the nature of the primary tumor by the response that occurs. If biopsy on the neck must be done to determine the type of tumor, the committee suggests that a progressing tumor be not excised for a piece of tissue but that a single node should be removed. Radical neck dissection in the anaplastic types usually is followed by recurrences. Therefore, radiation is advised. In most of the adult types, when the primary tumor has been adequately cared for, radical neck dissection should be performed. All cases for palliation should have only radiation.

Another tumor occasionally observed arising from the palate, buccal mucosa, alveolar border, the nares, the base of the tongue and even the face and lips, lacrimal gland and larynx, is the so-called mixed tumor of salivary gland type. The symptoms usually

are mechanical, the tumor presenting itself as a single movable, circumscribed nodule, lying free under the skin or mucous membrane. In almost all locations about the mouth, this tumor is amenable to surgical excision by knife or cautery, without the production of serious deformity. If complete surgical excision cannot be accomplished, it should be treated by radiation.

Fibroma (rare), sometimes called fibrosarcoma because of its histologic picture, is most commonly seen in the nasopharynx. This is a tumor usually of boys between the ages of ten and twenty. It is benign in the sense that it does not metastasize, but it has rapid infiltrative growth with a well marked blood supply. Radiation has fair possibilities of palliation, and some cures have been accomplished by this means alone. This tumor usually makes itself known by obstruction to breathing and by bleeding.

2. Melanoma is another rare condition, rapidly growing, a pigmented, nodular, soft, vascular tumor, metastasizing so early that prognosis is almost universally hopeless. Massive cauterization is recommended and radium packs may control the growth for a time. Surgical excision is apt to be complicated by excessive hemorrhage and should not be attempted, at least until after adequate preoperative radiation.

LARYNX

Hoarseness is the one important early symptom of laryngeal carcinoma and demands early laryngoscopy. Carcinoma must be carefully distinguished from simple papilloma, tuberculosis and lues. The committee believes that biopsy is in order to establish diagnosis.

In carcinoma of the larynx one must distinguish between intrinsic and extrinsic lesions. For extrinsic lesions, surgery is usually out of the question, and treatment must consist of radiation. Tumors have been cured by this method. Furthermore, preliminary radiation of extrinsic laryngeal cancer may so alter it as to make the growth operable. Certainly the greatest palliation is obtained by radiation. For intrinsic lesions of the larynx, surgery offers the best chance of cure, preferably following preliminary irradiation. In selected cases of early intrinsic cancer, laryngofissure plus radiation may offer as much chance of cure as laryngectomy.

SUMMARY

1. Malignant tumors of the nasal passages do not give rise to characteristic symptoms in their early curable stages. Chronic nasal discharge or epistaxis or neuralgic pain in the region of the sinus should not be accepted as caused by inflammatory disease until malignancy has been ruled out.

2. The presence of symptoms referable to the eye or ear or the distribution of the fifth nerve require thorough nose and throat examination for possible malignancy. Furthermore, enlarged cervical nodes are so frequently the earliest symptom of malignancy in the nose and throat that their presence also requires thorough nose and throat examination.

3. Biopsy is essential to make a diagnosis.

4. Tumors posterior to the anterior tonsillar pillar are frequently very radiosensitive; and it would appear that our greatest hope in controlling these lesions lies in the field of radiation.

Respectfully submitted,

COMMITTEE ON EYE, EAR, NOSE AND
THROAT TUMORS:

Dewey R. Powell,
Chairman
Frank S. Baxter,
Secretary
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Charles Wm. Brown
A. E. Edgerton
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Walter Scott Franklin
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George H. Kress
Robert C. Martin
C. H. Montgomery
Roy F. Nelson
Otto H. Pflueger
F. H. Rodenbaugh
E. C. Sewall
Milton H. Shutes
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STATE MEDICAL ASSOCIATIONS

This department contains official notices, reports of county society proceedings and other information having to do with the state associations and their component county societies. The copy for the department is edited by the state association secretaries, to whom communications for this department should be sent. Rosters of state association officers and committees and of component county societies and affiliated organizations, are printed in the directories noted under Miscellany, on the front cover index.

CALIFORNIA MEDICAL ASSOCIATION

JOSEPH M. KING.....President
GEORGE G. REINLE.....President-Elect
EMMA W. POPE.....Secretary-Treasurer

OFFICIAL NOTICES

Hotel Del Monte

Rates for Annual Session, April 24-27, 1933

The following rates are quoted, American Plan:

Single room with bath (one person), \$9 per day.

Double room with bath (two persons), \$8 each person per day.

Two single rooms, bath between (two persons), \$8.50 each person per day.

Two double rooms, bath between (four persons), \$7.50 each person per day.

Two double rooms, bath between (six persons, bed for each), \$7 each person per day.

A few rooms without bath on the fourth floor are available. Rates secured from the hotel.

* * *

Delinquency Reason for Discontinuance of Journal.

"If the annual assessment of dues," which Chapter X, Section 1, of the By-Laws states is payable on January 1, "is not paid on or before April 1 of any year, such member shall automatically lose his membership in the California Medical Association as of April 1 of such year."

Loss of membership includes loss of CALIFORNIA AND WESTERN MEDICINE. Names of delinquent members are each year removed from the April mailing list, and while "the Council of this Association in its discretion upon payment of such unpaid dues accruing thereafter, may at any time reinstate such member" missing numbers of CALIFORNIA AND WESTERN MEDICINE which have been lost through such delinquency cannot be supplied on request of the reinstated member, as only a small excess over the actual number of names on each mailing list is ordered.

Remember the date of delinquency, *April 1*. Guard against loss of your state journal by paying your annual dues now.

COMPONENT COUNTY MEDICAL SOCIETIES

ORANGE COUNTY

The regular February meeting of the Orange County Medical Society was held at 8 p. m. in the chapel of the Orange County General Hospital. President Wallace presided, and because of the length of the business meeting the scientific program was held first.

Dr. W. W. Roblee of Riverside gave a great deal of information of the medical economics and urged the association to take more interest in medical politics and adverse assembly bills.

Dr. Harry Zaiser, who attended the last Council meeting, reported on the narcotic law.

Dr. H. Wiley and Mr. B. Read spoke briefly on the *Public Health League of California*, explaining its purpose and how it functions. On motion, a committee was appointed to further study the league.

Dr. G. Wendell Olson gave an instructive talk on the cause and symptoms of bronchial asthma. Dr. M. W. Hollingsworth spoke on the treatment.

During the business meeting that followed, the report of the Auditing Committee was accepted. The first reading of six new applications for membership was heard. Following the recommendation of the board of managers, Dr. Frank Ashmore was reinstated to full membership by ballot.

WALDO S. WEHRLY, *Secretary*.

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RIVERSIDE COUNTY

Plans were launched by the Riverside County Medical Society at a joint meeting with the Woman's Auxiliary at the Mission Inn to bring the 1934 convention of the California Medical Association to Riverside.

The meeting, which was preceded by a dinner, provided one of the most gala occasions the medical fraternity has ever had in Riverside.

It was decided to extend the invitation for 1934 at the House of Delegates when the California Medical Association meets in Del Monte in April. Every effort will be made to induce the Association to select Riverside.

The chief speaker on the program was Dr. Joseph M. King, president of the State Association, who called attention to the bills in the legislature that have to do with medical problems and public health. Doctor King discussed the bills from the standpoint of the value they have to the public and taxpayer.

Mrs. F. E. Coulter, president of the Woman's Auxiliary of the State Association, preceded Doctor King and spoke on what the auxiliary can do to help the Association.

Mr. Ben H. Read, executive secretary of the Public Health League of California, spoke briefly on the purpose of the league, which "is to unite in one group representatives of the numerous medical, dental, nursing, pharmaceutical, hospital, and lay organizations which have a common interest in furthering the welfare of scientific care of the sick, preventing disease and in reducing as much as possible the large and increasing expenditures of public funds for medical charity."

Dr. W. W. Roblee delivered a rather humorous talk on *What Wives Should Know About Their Husbands' Business*.

Senator Leonard J. Difani, a special guest, spoke briefly on the problems of the legislature and the need of economy in lightening the burdens of the taxpayer.

THOMAS A. CARD, *Secretary*.

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SAN BERNARDINO COUNTY

A regular meeting of the San Bernardino County Medical Society was held at the County Hospital in San Bernardino on Tuesday, February 7, at 8 p. m. About fifty members were present.

The meeting was called to order by the president, and the application of Dr. S. S. Pond of Patton was voted on and accepted.

The following program of the evening was given: *Skin Tests in the Diagnosis and Treatment of Allergic Diseases* by Dr. George Piness of Los Angeles. *The Use of Diet in the Identification and Control of Food Allergies* by Miss Jane Dale, Ph. D., consulting dietitian of Los Angeles. *Management of the Asthmatic State* by Dr. Julian Cohn of Los Angeles.

Discussion was opened by Dr. Hyman Miller of Los Angeles.

A. T. GAGE, *Secretary Pro Tem*.

SAN JOAQUIN COUNTY

The stated meeting of the San Joaquin County Medical Society was held on Thursday, February 2, in the Medico-Dental clubrooms, 242 North Sutter Street, Stockton. The meeting was called to order at 8:15 p. m. by President Doughty.

President Doughty gave a brief report of the joint meeting conducted by the Napa County Society in Oakland recently, which was attended by Doctors Doughty, Broadbuss, O'Connor, and Van Meter, of our society.

Doctor Kaplan, chairman of the Committee on Social Problems, gave a report showing the contacts which are being made and outlining the methods of study and investigation. He reported much work has been done to date, and pleaded for more coöperation from the members in this important study.

Dr. Fred DeLappe of Modesto, councilor for this district of the California Medical Association, announced the coming convention of the state society and urged all who could to attend. The doctor spoke at length on the matter of membership, to show that the increase is not proportionate to the increase in number of licentiates in the state. He reviewed the work of the Cancer Commission and the Public Relations Commission, and also called attention to the many bills before this legislature concerned with medical conditions.

The scientific paper of the evening was read by Dr. Leo P. Bell of Sacramento on the subject of *The Results of Operative Procedure on the Stomach and Duodenum for Cure of Gastric and Duodenal Ulcer*. Doctor Lawson of Sacramento first demonstrated a number of slides, prepared from x-ray pictures, to show the possibility of diagnosing and locating the site of these ulcers.

Doctor Bell especially dealt with the matter of when to operate and what type of operation to use. He was speaking in an effort to clarify the relation between the internist and the surgeon.

The subject was discussed by Doctors Bollinger, Lynch, Sheldon, and Bell.

The meeting was adjourned at 10:30 o'clock and refreshments served.

C. A. BROADBASS, *Secretary*.

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SANTA BARBARA COUNTY

The regular meeting of the Santa Barbara County Medical Society was held in the Bissell auditorium of the Cottage Hospital on Monday, February 13, with Presiding Geymann presiding.

Dr. Rexwald Brown gave a most comprehensive and enlightening report on the findings of the Five-Year Committee appointed to investigate the costs of medical care. The paper was so timely and interesting that it was moved, seconded and carried, that the secretary have sufficient copies printed to distribute to the membership.

The paper was discussed by Doctors Main, Freidell, Koefod, and Ullmann.

The society then went into executive session and Doctor Freidell spoke regarding a course of lectures to be given by the Merchants' Credit Association on *Problems of the Doctor*. He introduced Mr. Remele of the Merchants' Credit Association, who gave a brief résumé of what the course would cover and stated that it was to be given especially to the secretaries of the doctors, and his principal objective was to find out if a sufficient number of the membership would be interested in such a course. After his explanation it was ascertained that there would be a sufficient number interested and it was decided that further arrangements would be made in the near future.

Doctor d'Alessio read a copy of the proposed Bliss bill regarding county hospitals. This was discussed by Doctors Sansum, Ullmann, Henderson, Eder, Freidell, Sink, and Brown.

Doctor Ullmann, as councilor for this district, advised that no action be taken at this time in that

should the society make recommendations on any proposed bill at this time so many amendments could be made that the meaning of the bill would be completely changed. He also stated that the state society would study carefully all the proposed bills just after the time when no more new bills could be presented to the legislature. At that time, should the state society deem it necessary to have help from the component county society, the county society would be notified. As this matter is already being discussed by the Public Relations Committee, it was moved, seconded and carried, that the whole matter be left to them.

Doctor Coblentz spoke upon the conditions in the Santa Maria Hospital and at his request it was moved, seconded and carried, that the president appoint a committee to formulate rules and regulations for the management of the hospital. If these rules and regulations are adopted by the society they will be presented to the Board of Supervisors with recommendations for their adoption.

The president stated that Sister Winifred of the St. Francis Hospital desired a set of rules applicable to both hospitals for all dispensary cases. This was referred to the Public Relations Committee.

WILLIAM H. EATON, *Secretary*.

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SANTA CRUZ COUNTY

The annual business meeting of the society was held on December 13, 1932. It was decided to continue the successful method of holding monthly meetings at the Hotel Rio del Mar at Aptos. This being a central location for all members, larger attendance has been noted. The following officers were elected to serve during 1933: President, J. Harrington of Santa Cruz; first vice-president, S. P. Tipton of Watsonville; second vice-president, S. W. Dowling of Santa Cruz; secretary-treasurer, S. B. Randall of Santa Cruz; censor to 1935, W. E. Fehlman of Santa Cruz; delegate, L. M. Liles of Watsonville; alternate, F. P. Shenk of Santa Cruz.

At the December meeting of the society the speakers of the evening were: Doctors George W. Pierce and Gerald O'Connor of San Francisco, who presented an illustrated talk on *Infections and Injuries of the Hand*.

Dr. Howard Fleming presented a paper on *Head Injuries* at the January meeting. The material was quite complete and very instructive. Those present were rewarded by a very clear and concise presentation of a subject of interest to all in general practice.

The February meeting was given over to the subject of *Medical Economics*. In particular, the discussion had to do with various types of medical service and hospital insurance schemes. Dr. C. Dukes of Oakland described and discussed the methods now in the process of development in Alameda County. Dr. W. Dickie presented the medical service plan outlined by his committee for the state society. The applicability of these plans to a county unit the size of Santa Cruz County was discussed by those present.

The following members were elected to membership at the February meeting: Doctors George Tolman of Watsonville, W. L. Ellis of Boulder Creek, and N. MacLafferty of Soquel.

SAMUEL B. RANDALL, *Secretary*.

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SHASTA COUNTY

The January meeting of the Shasta County Medical Society was held on January 21 at Dozier's Sanitarium in Redding.

The meeting was called to order at 8 p. m. by the president, Dr. Earnest Dozier. Members present were: Doctors Sewall, Saylor, Dozier, Gerrard, and Olberg. Visitors were: Dr. W. M. Wilson of Weaver-ville and Dr. O. J. Hansen of Redding.

The society voted their disapproval of a recent plan of health insurance and medical service. The

society went on record against the further building of veterans' hospitals and a too extensive practice of antitoxin immunization and smallpox vaccination by the state and county boards of health on patients who can afford such service from private physicians.

The meeting night was changed from the third Saturday of the month to the third Monday of the month. Dr. W. M. Wilson of Weaverville and Dr. O. J. Hansen of Redding were elected members of the society.

F. H. OLBERG, *Secretary*.

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SONOMA COUNTY

The Sonoma County Medical Society held its regular monthly meeting for February as a dinner at The Tavern, north of Santa Rosa. President Mark L. Lewis presided. Fifteen members and guests were present.

The entire meeting was devoted to a discussion of legislative and other problems of vital interest to the medical profession.

W. C. SHIPLEY, *Secretary*.

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STANISLAUS COUNTY

The monthly meeting of the Stanislaus County Medical Society was held at Grollman's, 820 Twelfth Street, February 10.

The meeting was called to order by Vice-president Marion Collins. Eighteen members were present.

Doctor DeLappe moved that \$60 be donated for a half-page article in April, program edition of *News Herald*, giving the history of the Stanislaus County Medical Society and hospitals of Modesto. Motion was seconded by Doctor Maxwell, and carried.

The Public Relations Committee and Doctor McPheeters were appointed to prepare the article.

A motion was made by Doctor McPheeters, and second by Doctor Hiatt, that the secretary write Governor Rolph protesting against the threatened abolishment of the State Narcotic Division for enforcement of these laws. Motion carried.

Dr. James Watkins of San Francisco read a very interesting paper on *Fracture of the Spine*.

J. A. PORTER, *Secretary*.

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TULARE COUNTY

The Tulare County Medical Society met at Motley's Café in Visalia on January 29. Dinner was served preceding the meeting. The newly elected president, Doctor Kohn, opened the meeting.

Doctor DeLappe, district councilor, presented a brief survey of the work of the Council for 1932. He made a valuable suggestion in regard to the practice of electing delegates to the state meetings to serve for a number of years instead of for one session that the delegate may become fully acquainted with this work.

The following committees, previously appointed, were announced:

Public Relations Committee—I. M. Lipson of Visalia (chairman), Austin Miller of Porterville, I. H. Betts of Visalia, E. R. Zumwalt of Tulare, R. C. Hill of Exeter, Frank Kohn of Tulare (ex officio).

Venereal Disease Clinic Committee—A. W. Preston of Visalia (chairman), P. S. Barber of Porterville, E. Brigham of Dinuba.

Committee on History and Obituaries—S. S. Ginsburg of Visalia (chairman), H. G. Campbell of Lindsay.

Membership Committee—Donald C. Fowler of Exeter (chairman), L. R. Leidig of Porterville, F. R. Guido of Visalia.

The following committee reports were submitted: Doctor Fowler presented Dr. W. B. Parkinson of Tulare, who was unanimously elected to membership. Doctor Seligman, member of Tulare County Medical Society since 1920, was recently granted transfer to Santa Clara County. Doctor Preston reported the change of the county supervisorial board placed the

present problem of venereal disease clinics in abeyance. Doctor Betts reported briefly on a proposed educational program with a letter from Doctor Naffziger, who signified his willingness to conduct a series of neurological meetings. Doctor Lipson, chairman of the Public Relations Committee, presented the following summary of their activities:

The plan of medical insurance, discussed at some length, was temporarily tabled. It was felt that the Fresno County Medical Society could be contacted for further information through their active research committee.

The Tulare County Hospital work was discussed fully and the following conclusions reached: That it be the consensus of opinion of this committee (1) that a Social Service worker be maintained at the County Hospital. (2) That the name of the Tulare County General Hospital be changed to the Tulare County Charity Hospital. (3) That only charity (nonpay) cases be admitted to the hospital. (4) That the establishment of a "pay" wing for general use of all citizens be not recommended. (5) That the staffing of the county hospital by members of the Tulare County Medical Society be not recommended.

The treasurer's report for 1932 was submitted and accepted.

At this point a communication from Dr. H. G. Campbell was read relative to the matter of accepting pay patients at the county hospital, and after discussion it was moved to refer the matter to the Public Relations Committee for further report.

An invitation from the Tulare County Bar Association inviting the medical society to attend a joint meeting on February 5 was read.

A letter on immunization procedures from the State Board of Health was read.

At the conclusion of the business meeting the guest speaker of the evening was introduced, Dr. William M. Newman of San Francisco, who presented two papers—one on *Angina Pectoris*, and a second on *The Diagnosis and Treatment of Acute Coronary Artery Occlusion*; and, in addition, a reel on *Arrhythmias Produced in the Mammalian Heart*. The papers were exceptionally well presented and thoroughly enjoyed by the members. An exceptional attendance was present to hear Doctor Newman.

Following Doctor Newman's paper, Dr. Neil Dau of Fresno opened the discussion. At adjournment a vote of thanks was tendered Doctors Newman and Dau for their contributions to the evening.

Members in attendance were: Doctors Austin Miller, Annie Bond, E. C. Bond, Campbell, Newton Miller, Kohn, Weiss, Betts, Tourtillott, Barber, Parkinson, Zeller, Zumwalt, Ginsburg, Furness, Johnstone, Fowler, Preston, Guido, Brigham, Hill, Lipson, and Seiberth. Besides the speakers we had as guests, Doctors Watke of Tulare, Fry of Exeter, Brigham of Hanford, Fillmore of Strathmore, and Miller of Dinuba.

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An address on the life of George Washington was given by Judge Emmett Seawell, Associate Justice of the Supreme Court, at the annual joint meeting of the Tulare County Bar Association and the Tulare County Medical Society held at Motley's Café on February 5.

Mr. C. L. Bradley, president of the Bar Association, opened the meeting with a brief address, welcoming the physicians who were the guests of the attorneys at the gathering.

KARL F. WEISS, *Secretary*.

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VENTURA COUNTY

The February meeting of the Ventura County Medical Society was held at the Ventura Country Club at Satcoy on February 14. A dinner was served to twenty members and nine guests. Members present were: Doctors Jones, Broughton, Mosher, D. G. Clark, Welch, W. S. Clark, Homer, Hendricks, Charles Smolt, Foscett, Bianchi, Shore, Armistead, Strong, Achenbach, Coffey, Illick, Drace, Bardill, and Felberbaum. Visitors present were: Doctors Shelton, Wills, Ullmann, Clark, Cavanaugh, and Mason.

Following the dinner, the meeting was called to order by Doctor Hendricks. On account of the late hour, the minutes of the last meeting, communications, and old and new business were dispensed with.

Dr. W. S. Clark introduced Doctor Shelton of Santa Barbara, who gave an interesting talk on *Endocrinology*. Doctor Wills of Santa Barbara was introduced by Doctor Hendricks as the second speaker of the evening. Doctor Wills gave an interesting talk on *Endothemic Resection of the Prostate and the Development of the Instruments Used in the Operation*.

WILLIAM FELBERBAUM, *Secretary*.

CHANGES IN MEMBERSHIP

New Members (49)

Alameda County.—Sadie Edith Berkove, Emil Leland Blumenthal, Clark J. Burnham, Jr., Harold Clinton Carpenter, Daniel Scott Fox, Belle E. Merrill, Robert Herbert Miles, Edwin Alexander Patterson, Arthur Frank Steinmetz, Bruce Miller Stephens, Kenneth L. Tattersall, Douglas David Toffelnier, Francis Rene Van de Carr.

Los Angeles County.—Harold Eugene Beasley, Ernest Otto Boetticher, Maurice B. Bonta, John Albert E. Bullis, Samuel David Burgeson, Jr., Mark Connell Cameron, Jr., Frederic Ewens, Huna Jacob Fainstein, Dorothy M. Franklin, Edward A. Gummig.

Mendocino County.—Eugene H. Benson, Jr., Thomas P. Hill, Herschel O. Cleland, Edward M. Hummel, Joseph John Kirwin, Olga Alice Miller, Robert Byron Smalley, George S. Wrinkle.

Merced County.—George B. Pimentel, John Stanford Webster.

Monterey County.—James Henry McPharlin, John Randolph Gray, Harry Richard Lusignan, Kensuke Murakami.

Placer County.—Adrian C. Crossen, Edward B. Radford, Ray Cook Atkinson, Michael Flatley.

San Bernardino County.—James Carl Carmack.

San Francisco County.—Gaynelle Robertson, David Abram Susnow.

Santa Barbara County.—Clifford Edmund Case.

Santa Clara County.—Max C. Hawley.

Solano County.—Ambrose Joseph Ryan.

Sonoma County.—Leon Lewis.

Stanislaus County.—Marion Carter Collins.

Transferred (6)

Julian Cohn, from San Francisco to Los Angeles County.

Frederick J. Crease, from Los Angeles to Kern County.

S. N. Jorgensen, from Humboldt to San Francisco County.

La Rue Moore, from Fresno to San Francisco County.

Ina M. Richter, from San Francisco to Santa Barbara County.

Louis L. Seligman, from Tulare to Santa Clara.

In Memoriam

Armstrong, Maurice Moray. Died in Los Angeles, February 8, 1933, age 60 years. Graduate of University of Southern California School of Medicine, Los Angeles, 1902. Licensed in California, 1902. Doctor Armstrong was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

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Brooks, Thomas Cottrell. Died January 10, 1933, age 58 years. Graduate of Illinois Medical College, Chicago, 1903. Licensed in California, 1922. Doctor Brooks was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.

Craig, William H. Died in Upland, January 9, 1933, age 74 years. Graduate of College of Physicians and Surgeons of Baltimore, Maryland, 1886. Licensed in California, 1895. Doctor Craig was a retired member of the San Bernardino County Medical Society, the California Medical Association, and the American Medical Association.

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Knorp, Francis Frederick. Died in San Francisco, January 20, 1933, age 60 years. Graduate of Cooper Medical College, San Francisco, 1892. Licensed in California, 1893. Doctor Knorp was a member of the San Francisco County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

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Miller, Charles Howard. Died in San Francisco, February 2, 1933, age 62 years. Graduate of Cooper Medical College, San Francisco, 1896. Licensed in California, 1898. Doctor Miller was a member of the Alameda County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

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Miller, Edwin M. Died February 16, 1933, age 63 years. Graduate of Ensworth Medical College, St. Joseph, 1897. Licensed in California, 1921. Doctor Miller was a member of the Santa Clara County Medical Society, the California Medical Association, and was a Fellow of the American Medical Association.

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Mueller, Carl Amandus. Died in Redding, January 30, 1933, age 67 years. Graduate of Missouri Medical College, St. Louis, 1889. Licensed in California, 1898. Doctor Mueller was a member of the Shasta County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

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Parks, Joseph Andrew. Died in La Mesa, February 8, 1933, age 61 years. Graduate of Vanderbilt University School of Medicine, Nashville, Tennessee, 1898. Licensed in California, 1904. Doctor Parks was a member of the San Diego County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

OBITUARIES

Edwin M. Miller 1869-1933

Dr. Edwin M. Miller, 63 years of age, died February 16 after a sudden heart attack the previous evening.

Stricken while alone in his office, Doctor Miller summoned aid by telephone. His death was unexpected, although he had been in failing health for the past year.

Death ended an intensely active career for Doctor Miller, who in addition to his extensive general practice and his work in Kiwanis, has for the past twenty-five years served in school board work. For thirteen years Doctor Miller served continuously as secretary of the Los Gatos Union High School Board.

Born in Troy, Ohio, Doctor Miller was a graduate of Baker University at Baldwin, Kansas, and studied for his degree at Ensworth Medical College at St. Louis, Missouri. His first practice was in Mound City, Missouri, where, in addition to general practice, he served as a railroad physician. During the World War he was a member of an examining board.

Doctor Miller came to Los Gatos thirteen years ago with his wife and three children. Since then he has been continuously engaged in general practice at Los Gatos. For several terms Doctor Miller has served his county society either as a delegate or alternate to the California State Medical Association. He was truly a doctor of the old school, and his passing is keenly felt both by the profession of this community and the public.

E. SCHMITT.

H. Wilson Levengood 1882-1933

Dr. H. Wilson Levengood was born in Pottstown, Pennsylvania, in 1882. Following a premedical course at Temple University, Philadelphia, he studied at the Medico-Chirurgical College, which is now the post-graduate department of the University of Pennsylvania.

Doctor Levengood was for a year resident physician at Pottenger's Sanitarium for Tuberculosis at Monrovia. Several years' practice in Jerome, Arizona, followed. In 1909 he returned to Los Angeles County and for twenty years was identified with medical welfare and cultural activities of the Ocean Park district.

He was the first chief of staff of the Santa Monica Welfare Clinic, an institution for which he always worked earnestly. The Santa Monica Bay Music Association was organized in his home and he assisted in writing the constitution of that organization. A talented violinist, he had always forwarded musical activities of Santa Monica and served as treasurer of the music association for several years.

Always interested in the beautification of Santa Monica, Doctor Levengood was at one time park commissioner and served on the first board of the city planning commission.

He was a member of the local groups of Masons and Elks, and of the Uplifters and Los Angeles University clubs. He was several times president of the Santa Monica Medical Association and for the last three years had been chief of staff of the Santa Monica Hospital.

Doctor Levengood studied at the New York Post-graduate Hospital, the Manhattan Eye and Ear Hospital, the New York Eye and Ear Infirmary, the Universities of Edinburgh and Vienna, and Moorfields' Eye Hospital in London.

THE WOMAN'S AUXILIARY TO THE CALIFORNIA MEDICAL ASSOCIATION*

Message from the President of the California Medical Association Auxiliary

Last spring when I became president of the State Auxiliary, I asked that each county make a special effort to perfect its organization, believing that a higher education and development of quality within the groups already formed was of greater importance than rapid expansion. With this in mind, I thought you might enjoy hearing something of the history and growth of the auxiliary movement.

The first auxiliary was organized in Dallas County, Texas, in 1917. The following year the State of Texas boasted of the first state auxiliary. In 1922, when the American Medical Association was meeting in St. Louis, the plan was presented to the House of Delegates and endorsed by them. It is interesting to know that in one year nine states were organized and that up to July, 1932, auxiliaries had been formed in thirty-six states and, in addition, one county in each of two states has an organization which is the nucleus for a state auxiliary.

In the discussion that took place in the American Medical Association Council meeting, following the presentation of the needs and objective of an auxiliary,

* As county-auxiliaries to the Woman's Auxiliary to the California Medical Association are formed, the names of their officers should be forwarded to Mrs. Clifford A. Wright, chairman of the Publicity and Publications Committee, 454 South Irving Boulevard, Los Angeles. Brief reports of county auxiliary meetings will be welcomed by Mrs. Wright and must be sent to her before publication takes place in this column. For lists of state and county officers, see advertising page 6. The Council of the California Medical Association has instructed the editors to allocate one page in every issue for Woman's Auxiliary notes.

leaders were frank to acknowledge its social value within the profession, a destructive force within as well as without the profession having been recognized. Unity and solidarity being the acknowledged panacea, a developed social interest and fellowship between the members of doctors' families seemed the most likely medium for action.

It is possible for all auxiliaries to do much in the development of this fellowship which is the harbinger of unity of purpose. They may exert their influence, singly and collectively, toward increased attendance at all medical meetings, whether they be county, state, or national. There are great possibilities in their opportunity to assist in the social life of these meetings. However, social activities are not sufficient in any organization to hold the interest of busy, thinking women, and as a result of a search for larger fields of service, we find that the activities of our organization have divided themselves into the following classes: social, philanthropic, legislative, educational, and public relations. Each county auxiliary is encouraged to develop along each of these lines, but local needs and the desires of the individual auxiliary must determine the objective.

The philanthropic work done is generally closely related to the medical profession: Pennsylvania contributes to a medical benevolent fund for the care of dependent medical men or their families; Missouri contributes to a health educational fund; several states have loan funds for medical students; some contribute to preventorium; Louisiana sponsors a school for potentially tuberculous children; the Norfolk, Virginia, auxiliary raised \$1,600 to endow a hospital bed, collected 1,200 books, 2,000 magazines, and are establishing permanent libraries in hospitals and welfare associations. Open-air camps, Red Cross activities, milk for undernourished children, assistance to hospitals—all lend themselves to an organization anxious to be of real service.

The legislative activities of an auxiliary are manifest only upon the recommendation or approval of the local advisory board. We might liken ourselves to a "reserve force," but, like all standing armies, our strength is measured largely by our equipment. Unless we are informed upon legislative matters relative to public health—this includes local, county, state, and national—we can never hope to step into the front lines effectively when called upon by the medical profession. This need of education on health laws opens an unlimited field for the local program chairman.

The educational program of the auxiliary at large is perhaps the most difficult of the five major activities due, no doubt, to our lack of preparation: our ignorance on matters that are of permanent importance. If we are to develop a loyalty to the profession among the laity, and become a liaison between the doctors and the public, "educating ourselves first," might well become the theme song of any auxiliary.

The Department of Public Relations is perhaps the least understood of the various activities, yet once understood it is the rosetta stone which opens before us new worlds to conquer. When proper leaders are chosen and correct methods of procedure are devised, it is in this realm that our greatest opportunities lie. These opportunities challenge us to bring about a new understanding between the medical profession and the layman. When the members of an auxiliary become well educated, they will reach into every phase of woman's organized work. Y. W. C. A. boards, Parent-Teacher associations, federated clubs, League of Women Voters—these are but a few of the opportunities presented where health programs may be arranged and where our own subtle influence may be felt.

This is a mere skeleton of possibilities. I leave to you the task of filling in the muscle and rounding out the fascia.

Component County Auxiliaries

San Diego.—Here is the money for you to go to the state convention! Write an essay on the *Doctor's Dilemma*, using a maximum of 500 words or a minimum of 250 words. Twenty dollars for the first prize, ten dollars for the second, and five dollars for the third prize is offered by the State Board of the Auxiliary to the California Medical Association. Doctors as well as their families may contribute. Send your papers to Mrs. Charles Howard, 4223 Arguello Street, San Diego, before March 31. The winning essay will be read at the state convention.

MRS. PAUL E. WEDGEWOOD,
Chairman of the Committee on Essay Contest.

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Santa Barbara.—The Woman's Auxiliary to the Santa Barbara County Medical Society met at the home of Mrs. F. J. Hornboch, 2131 State Street, on February 13. The meeting opened with a short business session, the president, Mrs. R. T. Atsatt, presiding. Fourteen were present.

After discussion, a decision was made to award prizes to the most outstanding graduate from the St. Francis Training School and the Knapp School of Nursing. It was moved by Mrs. Friedell and seconded by Mrs. van Pang that the sum be limited to \$10 for each nurse.

Mrs. Markthaler's resignation as treasurer was accepted with regret. Mrs. A. B. Wilcox was elected to fill the position.

The auxiliary was invited to a tea, given in honor of the fifth anniversary of the out-patient department of St. Francis Hospital.

After adjournment, the remainder of the evening was spent sewing on Red Cross garments, following which refreshments, planned by Mrs. W. J. Mellinger, were served.

MRS. W. R. HUNT, *Secretary.*

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Contra Costa.—The Woman's Auxiliary to the Contra Costa County Medical Society met at the home of Mrs. U. S. Abbott in Richmond, Mrs. Abbott presiding. Mrs. L. J. Hedges, as chairman of Hygeia Committee, turned over the sum of \$15.60, the proceeds from a bridge and tea party given at her home. It was moved by Mrs. Blake, seconded by Mrs. Daily, that this money be used for the placing of *Hygeia* in the schools throughout Contra Costa County. Motion carried. Mrs. S. N. Weil was appointed publicity chairman.

The newly elected officers are: President, Mrs. U. S. Abbott; first vice-president, Mrs. M. L. Fernandez; second vice-president, Mrs. Koho Dailey; secretary-treasurer, Mrs. W. S. Lucas.

MRS. W. S. LUCAS, *Secretary.*

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Orange.—The first regular meeting of the Woman's Auxiliary to the Orange County Medical Association for the new year was held Tuesday afternoon, February 7, in the home of Mrs. Frank L. Chaplaine, in Orange. Mrs. C. S. O'Toole of Anaheim, president, opened the meeting with a New Year's greeting to the members and guests.

Business for the afternoon centered around the discussion of the creation of an auxiliary loan fund for worthy medical students. It was decided that a sum be taken from the treasury and that personal donations be made to start the fund. This is a very worthy cause it is hoped that other auxiliaries in the state will become interested. Mrs. Herbert Johnston, Anaheim, offered the use of her home for a May musical tea for the benefit of this fund.

A luncheon at the Country Club to Mrs. F. E. Coulter, in appreciation of her constant interest and work in the auxiliary activities, will be held in April.

The speaker of the afternoon, Doctor Roblee of Riverside, addressed the meeting on *What a Doctor's*

Wife Should Know About Her Husband's Business. His talk was most enlightening and interesting. The necessity for the doctor's wife to keep alert in the rapid advancements in medicine, to maintain professional secrecy, and to be a partner in arranging the budget were points stressed. He believes the knowledge of the accomplishments made by scientific medicine of vital importance in the education of the public against cults. Doctor Roblee also spoke of the economic problems connected with the private physician's work, brought about by the present government medicine practices.

The meeting was closed with a delightful tea hour served by the hostesses, Mesdames Chaplaine, K. H. Sutherland, E. L. Russell, E. J. Steen, and W. S. Wallace. The table was beautifully decorated in red and white. A patriotic element was brought out by individual white cakes mounted with tiny American flags. The next meeting will be held at the home of Mrs. Dexter Ball, in Santa Ana.

MRS. NEWELL L. MOORE, *Secretary.*

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Riverside.—The Woman's Auxiliary to the Riverside County Medical Society was entertained Monday evening at the home of Mrs. W. W. Roblee, with Mrs. W. B. Payton, Mrs. Jesse Roe, and Mrs. L. J. Clark as assisting hostesses.

Mrs. T. A. Card, hostess chairman, and Mrs. Roblee, program chairman, reported their committee arrangements completed for the ensuing year. The Program Committee plans during this first year to devote the time to becoming better acquainted with local and county welfare organizations.

Dr. C. Van Zwahlenburg, a member of the Riverside County Medical Society, gave an address on *Hospitalization as Pertaining to Hospital Management, Medical Care Costs, Staff Organization and What It Means to Patients.*

Mrs. E. S. Moulton, president of the Community Hospital Auxiliary, reviewed the founding of the organization and told of the various ways in which the auxiliary gives service to the hospital. She urged all the doctors' wives to become better acquainted with the work of the auxiliary.

Mrs. A. W. Walker, president, presided and at the close of the meeting called attention to the fact that the February meeting would be held jointly with the Riverside County Medical Society. Dr. Joseph King, president of the California Medical Association, was the guest speaker.

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Sacramento.—Mr. O. H. Close, superintendent of the Preston School of Industry, addressed the members of the Woman's Auxiliary to the Sacramento Society for Medical Improvement at their meeting on January 17. Mr. Close spoke on *Crime Prevention and How the Cost of Crime May Be Reduced.* Members of the San Joaquin County Auxiliary were special guests for the evening.

Mrs. Frank Knell, Mrs. E. O. Brown, and Mrs. Paul Christman were selected as the Nominating Committee for the new officers to be elected in March. Mrs. F. N. Scatena, president, extended an invitation to members of the auxiliary to be guests of the Tuesday Club at their meeting on January 24. Dr. J. B. Harris was the guest speaker, and club members who are members of the auxiliary acted as hostesses.

Hostesses for a social hour following the meeting were: Mesdames Leo Fanell, M. Fanell, H. J. Davis, Dave Dozier, A. K. Dunlap, J. B. Harris, Russell Harris, M. N. Haworth, Howard Hall, Hugo Childress of Ione, and Paul Faws of Elk Grove.

News

Meeting of the State Auxiliary Board.—The State Board of the Woman's Auxiliary to the California Medical Association met on February 17 at the Biltmore Hotel in Los Angeles, the executive board meeting at 9:30, and the regular board at 10:30. Mrs. Coulter presided. Report will be printed in next issue.

NEVADA STATE MEDICAL ASSOCIATION

O. HOVENDEN, McGillPresident
D. A. SMITH, Mina.....President-Elect
J. N. VAN METER, Las VegasFirst Vice-President
FLEET H. HARRISON, Minden.....Second Vice-President
HORACE J. BROWN.....Secretary

COMPONENT COUNTY MEDICAL SOCIETIES

WASHOE COUNTY

The Washoe County Medical Society met in the State Building on Tuesday evening, February 14, President A. R. DaCosta presiding.

The society gave twenty minutes of its time to listen to a talk by a gentleman from Sacramento who was interested in forming an association in Reno to secure hospitalization on a sort of insurance plan. The society listened attentively, but the response from the members was not of sufficient importance to justify the members assuming any responsibility in coöperating with this plan, so the matter was dropped.

Next followed an exhibition by the local Fire Department, with Assistant Fire Chief George Twaddle in charge, on the method of resuscitating persons overcome by gas and smoke fumes from burning buildings. The apparatus is known as an inhalator. Instead of driving air and oxygen into the lungs, artificial respiration by the Schaffer method was done, and the mouth piece covering the mouth held carbon dioxide and oxygen in percentage solution. This method of resuscitation is applicable to pneumonia patients. The gaseous ingredients clear up the airways of the lungs, allowing more oxygen into the blood. This could be kept up for twenty-four hours or more, possibly aiding the patient to pass the crisis when resolution would clear the lungs. The exhibition was well received.

Then came the reading of resolutions by a committee, consisting of George L. Servoss, Donald Maclean, and C. W. West, as follows:

IN MEMORIAM—ARTHUR L. GROVER

WHEREAS, The All Wise Providence has seen fit to remove from our midst our brother physician, Arthur L. Grover; and

WHEREAS, This has brought great sorrow to his loved ones and to ourselves; now therefore be it

Resolved, That the Washoe County Medical Society tender to those who are grieving its sincerest sympathy in their hour of sadness; and be it further

Resolved, That a copy of these resolutions be placed in the hands of our late brother's family and that a copy also be placed upon the minutes of the Washoe County Medical Society.

IN MEMORIAM—JOHN TEES

WHEREAS, The Omnipotent Power has taken from us and his loved ones our fellow member, Dr. John Tees; and

WHEREAS, This has caused much sorrow and anguish upon the part of his family, as well as sorrow to ourselves; now therefore be it

Resolved, That we tender our sincerest sympathies to his family in this their hour of grief; and be it further

Resolved, That copies of these resolutions be placed in the hands of his family and that they be spread upon the minutes of the Washoe County Medical Society.

Dr. Grover died in Reno on January 28. He was a graduate of Harvard Medical University. During his life in Reno he was the pathologist at Saint Mary's Hospital. Prior to graduation Doctor Grover served in the Spanish-American War, in the Seventh Army Corps, serving in Cuba contemporary with the sece-

tary. He was a member of the First Battalion, First Maine Heavy Artillery. The local Post of the Spanish-American War Veterans officiated at the final rites.

Dr. John Tees was a graduate of McGill University, Montreal. During his residence in Reno for the past seventeen years, he specialized in pediatrics. His death occurred on February 3.

The evening's program was next in order. The Program Committee had decided to have a young man's night, with a program on pneumonia. The first paper was the treatment of pneumonia by Dr. H. A. Kimmel, recent graduate of the University of Pennsylvania, and Dr. Frank Samuels, recent graduate of the Medical College of Cornell University. The next paper was also on the treatment of pneumonia by Dr. Francis Morley of Gardnerville, recent graduate of the University of Colorado Medical Department. Then followed a paper on bronchopneumonia by Dr. A. W. Macpherson of Sparks, graduate of the College of Medical Evangelists, Los Angeles. The discussion was led by Dr. Dwight Hood of Reno, graduate of St. Louis Medical School.

The able ability displayed by each of the essayists showed that their training had been thorough and all along the same lines of the newest developments of medicine and mechanical therapeutics. Some of the essayists did not wholly agree that up to now the treatment by serum had become so standardized as to be universally pronounced a success. Yet the consensus of discussion was that leading eastern hospitals, with proper selection of serum given early, had been able to reduce the death rates in types one and types two by practically 50 per cent. The serum treatment was possibly the best treatment available for the profession today. One great objection to the serum treatment was its cost, an average case costing upward from \$75 to \$100 for serum alone. The use of diathermy was highly commended by some, while others spoke of optochin, a quinin derivative, as useful in the disease. The usual medications such as intravenous injection of quinin, hypertonic solutions of normal salt, injection of glucose, instillation of oxygen by the bowel, and oral medication by various drugs. All these were gone into by detail. The fact still remains that the mortality from this disease was higher when epidemics prevail and that with all the usual medications, the mortality in Nevada from pneumonia would run close to 50 per cent of all cases. The ideal treatment for pneumonia has yet to be discovered. Possibly it lies in a more perfect serum than is now attainable. The bacteremia incident in one-third of all patients, with a death rate of 80 per cent, can possibly be mitigated in the future by some intravenous antiseptic that might destroy the pneumococci and its capsule as well. Until better means are devised and a certain standardization of treatment is secured, it is evident that pneumonia will be treated by the practitioner along the lines which best appeal to him.

The thanks of the society was tendered the essayists for the able manner in which they presented their papers.

It was announced that the next meeting would be a symposium on obstetrics, with several illustrative movies.

There were twenty-two members and three visitors present.

THOMAS W. BATH, *Secretary*.

Nevada News

The following officers have been elected for 1933 for the various county societies of the Nevada State Medical Association:

Clark County—President, R. W. Martin of Las Vegas; secretary-treasurer, J. N. Van Meter of Las Vegas.

Washoe County—President, A. R. DaCosta of Reno; secretary-treasurer, Thomas W. Bath of Reno.

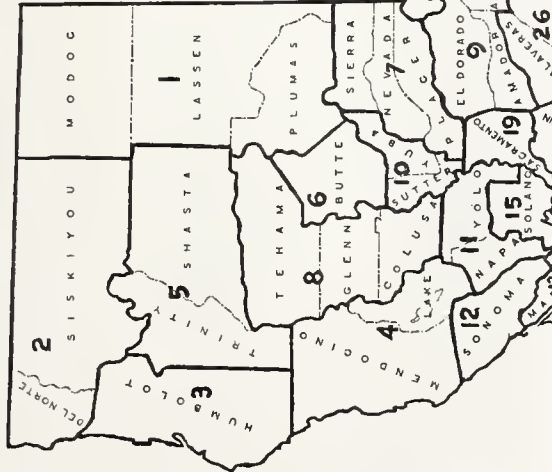
White Pine County—President, J. M. Thorup of Ely; secretary-treasurer, N. Smernoff of McGill.

HORACE J. BROWN, *Secretary*.

TABLE SUPPLEMENT TO ROSTER: CALIFORNIA COUNTIES—Statistics: General and Medical									
Official California Class	County	Key Number to Indicate County Medical Society†	Land Area Square Miles	1930 Population		Population, 1920	Per Cent of Increase 1920 to 1930	Est. No. M. D.'s in County	Est. No. Members in County Society‡
				Total	Per Square Mile				
1	Los Angeles	9	4,115	2,208,492	536.7	936,455	135.8	3,833	1,821
2	San Francisco ..	22	42	634,394	15,104.6	506,676	25.2	1,584	871
3	Alameda	1	732	474,883	648.7	344,177	38.0	739	435
4	San Diego	21	4,221	209,659	49.7	112,248	86.8	396	217
5	Santa Clara	27	1,328	145,118	109.3	100,676	44.1	241	146
6	Fresno	4	5,950	144,379	24.3	128,779	12.1	135	102
7	Sacramento	18	983	141,999	144.5	91,029	56.0	163	132
8	San Bernardino .	20	20,175	133,900	6.6	73,401	82.4	159	109
9	Orange	15	795	118,674	149.3	61,375	93.4	142	96
10	San Joaquin	23	1,448	102,940	71.1	79,905	28.8	110	76
11	Kern	7	8,003	82,570	10.3	54,843	50.6	63	53
12	Riverside	17	7,223	81,024	11.2	50,297	61.1	90	53
13	Contra Costa	3	714	78,608	110.1	53,889	45.9	65	38
14	Tulare	35	4,856	77,442	15.9	59,031	31.2	68	37
15	San Mateo	25	447	77,405	173.2	36,781	110.4	57	38
16	Santa Barbara ..	26	2,740	65,167	23.8	41,097	58.6	110	86
17	Sonoma	32	1,582	62,222	39.3	52,090	19.5	65	51
18	Imperial	6	4,089	60,903	14.9	43,453	40.2	35	22
19	Stanislaus	33	1,450	56,641	39.1	43,557	30.0	51	37
20	Ventura	37	1,858	54,976	29.6	28,724	91.4	56	30
21	Monterey	13	3,330	53,705	16.1	27,980	91.9	52	36
22	Humboldt	5	3,575	43,233	12.1	37,413	15.6	44	32
23	Marin	10	529	41,648	78.7	27,342	52.3	34	22
24	Solano	31	822	40,834	49.7	40,602	0.6	44	18
25	Santa Cruz	28	435	37,433	86.1	26,269	42.5	49	29
26	Merced	12	1,995	36,748	18.4	24,579	49.5	23	20
27	Butte	2	1,698	34,093	20.1	30,030	13.5	29	19
28	San Luis Obispo.	24	3,334	29,613	8.9	21,893	35.3	33	19
29	Siskiyou	30	6,256	25,480	4.1	18,545	37.4	23	15
30	Kings	N. S.	1,159	25,385	21.9	22,031	15.2	15	N. S.
31	Placer	16	1,411	24,468	17.3	18,584	31.7	34	*
32	Yolo	38	1,014	23,644	23.3	17,105	38.2	24	*
33	Mendocino	11	3,539	23,505	6.6	24,116	—2.5	21	13
34	Napa	14	783	22,897	29.2	20,678	10.7	40	26
35	Madera	N. S.	2,112	17,164	8.1	12,203	40.7	18	N. S.
36	Sutter	39	608	14,618	24.0	10,115	44.5	9	*
37	Shasta	29	3,858	13,927	3.6	13,361	4.2	11	10
38	Tehama	34	2,925	13,866	4.7	12,882	7.6	15	11
39	Lassen	8	4,531	12,589	2.8	8,507	48.0	9	*
40	Yuba	39	632	11,331	17.9	10,375	9.2	15	*
41	San Benito	19	1,392	11,311	8.1	8,995	25.7	14	7
42	Glenn	38	1,337	10,935	8.2	11,853	—7.7	47	*
43	Nevada	16	974	10,596	10.9	10,850	—2.3	10	*
44	Colusa	38	1,140	10,258	9.0	9,290	10.4	8	*
45	Tuolumne	36	2,190	9,271	4.2	7,768	19.3	11	6
46	Amador	N. S.	601	8,494	14.1	7,793	9.0	7	N. S.
47	El Dorado	16	1,737	8,325	4.8	6,426	29.6	5	*
48	Modoc	8	3,823	8,038	2.1	5,425	48.2	8	*
49	Plumas	8	2,593	7,913	3.1	5,681	39.3	7	*
50	Lake	N. S.	1,238	7,166	5.8	5,402	32.7	12	N. S.
51	Inyo	N. S.	9,991	6,555	0.7	7,031	—6.8	6	N. S.
52	Calaveras	N. S.	1,027	6,008	5.9	6,183	—2.8	9	N. S.
53	Del Norte	N. S.	1,024	4,739	4.6	2,759	71.8	5	N. S.
54	Mariposa	N. S.	1,463	3,233	2.2	2,775	16.5	3	N. S.
55	Trinity	N. S.	3,096	2,809	0.9	2,551	10.1	1	N. S.
56	Sierra	16	923	2,422	2.6	1,783	35.8	3	*
57	Mono	N. S.	3,030	1,360	0.4	960	41.7	2	N. S.
58	Alpine	N. S.	776	241	0.3	243	—0.8	..	N. S.
Totals			155,652	5,677,251	36.5	3,426,861	65.7		

† If a county has no county medical society, the letters N. S. (No Society) are placed after the name of the county.
* In the conjoint county medical societies the total membership for the entire conjoint societies is as follows: Lassen-Plumas, 11; Yolo-Colusa-Glenn, 27; Yuba-Sutter, 13; Placer-Nevada-El Dorado-Sierra, 28.
‡ For total membership by counties for the year 1932, see list as given at the beginning of the Roster text, which follows.

SENATORIAL DISTRICTS—1931



- 1. Modoc, Lassen and Plumas.
- 2. Del Norte and Siskiyou.
- 3. Humboldt.
- 4. Mendocino and Lake.
- 5. Trinity and Shasta.
- 6. Butte.
- 7. Sierra, Nevada and Placer.
- 8. Tehama, Glenn and Colusa.
- 9. El Dorado, Alpine, Amador and Yuba.
- 10. Yuba and Sutter.
- 11. Napa and Yolo.
- 12. Sonoma.
- 13. Marin.
- 14. San Francisco.
- 15. Solano.
- 16. Contra Costa.
- 17. Santa Clara.
- 18. Sacramento.
- 19. San Joaquin.
- 20. San Mateo.
- 21. Stanislaus.
- 22. Santa Cruz.
- 23. Merced and Madera.
- 24. Monterey and San Benito.
- 25. Tuolumne, and Calaveras.
- 26. Kings.
- 27. Mono and Inyo.
- 28. Fresno.
- 29. San Luis Obispo.
- 30. Santa Barbara.
- 31. Tulare.
- 32. Kern.
- 33. Orange.
- 34. San Bernardino.
- 35. Riverside.
- 36. Los Angeles.
- 37. Imperial.
- 38. San Diego.

KEY NUMBERS FOR COUNTY MEDICAL SOCIETIES

- 1. Alameda.
- 2. Butte.
- 3. Contra Costa.
- 4. Fresno.
- 5. Humboldt.
- 6. Imperial.
- 7. Kern.
- 8. Lassen, Modoc and Plumas.
- 9. Los Angeles.
- 10. Marin.
- 11. Mendocino.
- 12. Merced.
- 13. Monterey.
- 14. Napa.
- 15. Orange.
- 16. El Dorado, Nevada, Placer and Sierra.
- 17. Riverside.
- 18. Sacramento.
- 19. San Benito.
- 20. San Bernardino.
- 21. San Diego.
- 22. San Francisco.
- 23. San Joaquin.
- 24. San Luis Obispo.
- 25. Stanislaus.
- 26. Santa Barbara.
- 27. Santa Clara.
- 28. Santa Cruz.
- 29. Shasta.
- 30. Siskiyou.
- 31. Solano.
- 32. Sonoma.
- 33. Stanislaus.
- 34. Tehama.
- 35. Tulare.
- 36. Tuolumne.
- 37. Ventura.
- 38. Colusa, Glenn and Yolo.
- 39. Sutter and Yuba.

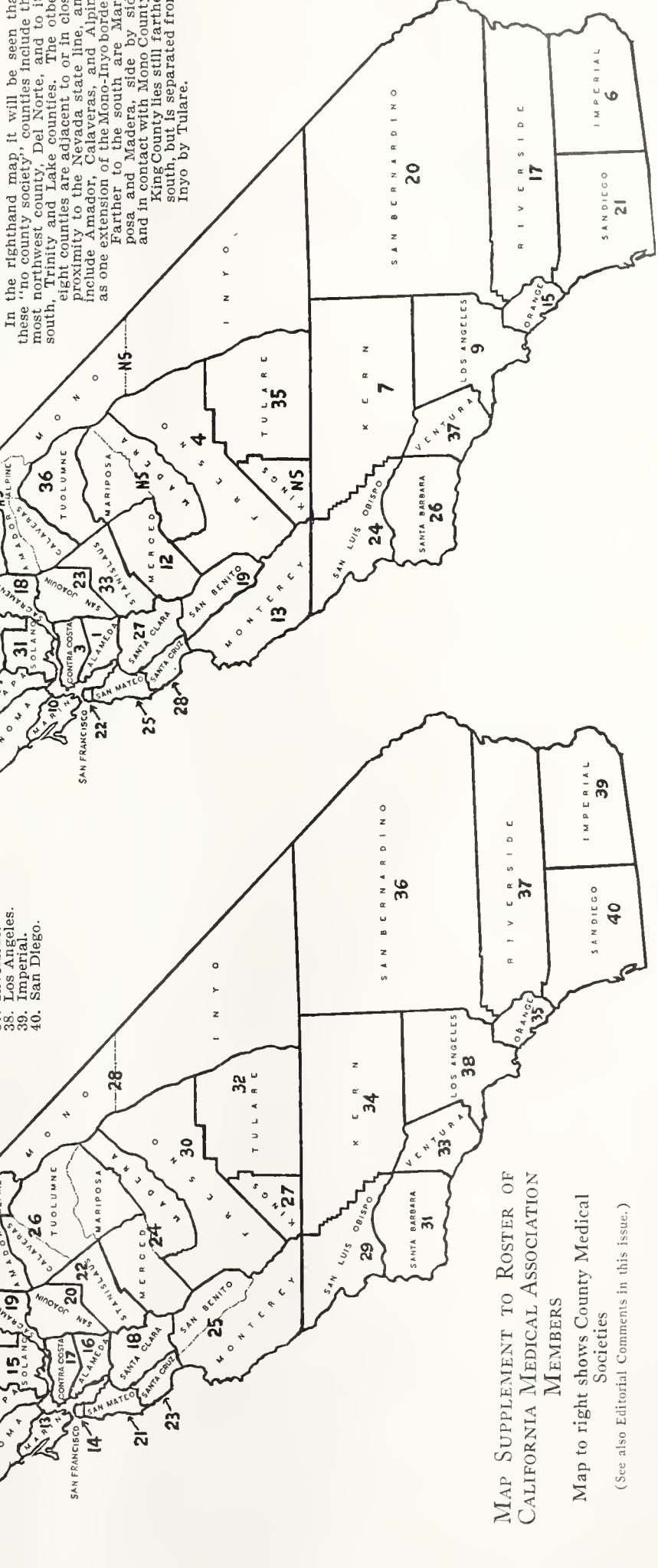
NS: NO COUNTY MEDICAL SOCIETIES

- Amador
- Inyo
- Kings
- Lake
- Madera
- Del Norte
- Mariposa
- Mono
- Trinity

In the righthand map, it will be seen that these "no county society" counties include the most northwest county, Del Norte, and to its south, Trinity and Lake counties. The other eight counties are adjacent to or in close proximity to the Nevada state line, and include Amador, Calaveras, and Alpine as one extension of the Mono-Inyo border. Farther to the south are Mariposa and Madera, side by side and in contact with Mono County. King County lies still farther south, but is separated from Inyo by Tulare.

MAP SUPPLEMENT TO ROSTER OF CALIFORNIA MEDICAL ASSOCIATION MEMBERS

Map to right shows County Medical Societies
(See also Editorial Comments in this issue.)



C. M. A. MEMBERSHIP ROSTER — MARCH, 1933

KEY NUMBERS FOR COUNTY MEDICAL SOCIETIES

1. Alameda County.
2. Butte County.
3. Contra Costa County.
4. Fresno County.
5. Humboldt County.
6. Imperial County.
7. Kern County.
8. Lassen-Plumas County.
9. Los Angeles County.
10. Marin County.
11. Mendocino County.
12. Merced County.
13. Monterey County.
14. Napa County.
15. Orange County.
16. Placer (El Dorado, Nevada, Sierra) County.
17. Riverside County.
18. Sacramento County.
19. San Benito County.
20. San Bernardino County.
21. San Diego County.
22. San Francisco County.
23. San Joaquin County.
24. San Luis Obispo County.
25. San Mateo County.
26. Santa Barbara County.
27. Santa Clara County.
28. Santa Cruz County.
29. Shasta County.
30. Siskiyou County.
31. Solano County.
32. Sonoma County.
33. Stanislaus County.
34. Tehama County.
35. Tulare County.
36. Tuolumne County.
37. Ventura County.
38. Yolo-Colusa-Glenn County.
39. Yuba-Sutter County.

COUNTY SOCIETY MEMBERSHIP TOTALS

(Year 1932)

Alameda County.....	446
Butte County.....	18
Contra Costa County.....	43
Fresno County.....	114
Humboldt County.....	33
Imperial County.....	23
Kern County.....	52
Lassen-Plumas County.....	12
Los Angeles County.....	1909
Marin County.....	25
Mendocino County.....	13
Merced County.....	19
Monterey County.....	38
Napa County.....	25
Orange County.....	108
Placer County.....	27
Riverside County.....	53
Sacramento County.....	133
San Benito County.....	5
San Bernardino County.....	117
San Diego County.....	225
San Francisco County.....	824
San Joaquin County.....	80
San Luis Obispo County.....	24
San Mateo County.....	52
Santa Barbara County.....	95
Santa Clara County.....	160
Santa Cruz County.....	33
Shasta County.....	9
Siskiyou County.....	18
Solano County.....	20
Sonoma County.....	44
Stanislaus County.....	40
Tehama County.....	13
Tulare County.....	40
Tuolumne County.....	3
Ventura County.....	29
Yolo-Colusa-Glenn County.....	32
Yuba-Sutter County.....	15
Active members.....	4969
Associate members.....	6
Retired members.....	44
Honorary members.....	16
Total membership.....	5035

Fifty-five members died during the year 1932.

Editor's Note.—The California Medical Association by-laws provide for an annual directory. Because every member receives the annual directory of the Board of Medical Examiners of the State of California, and in order to avoid the great cost of duplication of such a directory, the California Medical Association Council has decided to print in the official journal a simple roster of members, giving for each member the city or place of residence, with a key number to indicate the county medical society in which membership is held. For additional information concerning school of graduation, etc., the State Medical Board directory or the central office of the California Medical Association should be consulted. Errors in the list here printed should be promptly reported to the central office of the California Medical Association, Four Fifty Sutter, San Francisco.

NAME	COUNTY	SOCIETY NO.
Aarons, L. H.,	Oakland.....	1
Abbott, C. L.,	Oakland.....	1
Abbott, F. F.,	Ontario.....	20
Abbott, G. K.,	Glendale.....	9
Abbott, L. C.,	San Francisco.....	22
Abbott, U. S.,	Richmond.....	3
Abdun-Nur, A. S.,	Los Angeles.....	9
Abowitz, J.,	Los Angeles.....	9
Abraham, S. V.,	Los Angeles.....	9
Abraham, V. R.,	Long Beach.....	9
Abramson, M. J.,	Los Angeles.....	9
Achenbach, L. W.,	Ventura.....	37
Adams, B. O.,	Riverside.....	17
Adams, B. A.,	San Leandro.....	1
Adams, H. G.,	Fresno.....	4
Adams, J. H.,	Oakland.....	1
Adams, L. P.,	Oakland.....	1
Adams, L. E.,	Escondido.....	21
Adams, W. C.,	Oakland.....	1
Adams, W. L.,	Fresno.....	4
Addis, T.,	San Francisco.....	22
Adelstein, L. J.,	Los Angeles.....	9
Adler, H. M.,	Berkeley.....	1
Adler, H. F.,	San Francisco.....	22
Agmar, A. R.,	San Francisco.....	22
Ahlen, J.,	Livermore.....	1
Ahrens, C. L.,	Artesia.....	9
Ainley, F. C.,	Los Angeles.....	9
Alanson, M. R.,	San Francisco.....	22
Albert, J. A.,	Newman.....	33
Albert, W.,	Los Angeles.....	9
Alberty, W. M.,	East San Diego.....	21
Albi, P.,	San Francisco.....	22
Alcazar, I.,	Long Beach.....	9
Alcon, D. N.,	Los Angeles.....	9
Alden, B. F.,	San Francisco.....	22
Alden, E.,	Los Angeles.....	9
Alderson, V. G.,	Oakland.....	1
Alderson, H. E.,	San Francisco.....	22
Aldrich, W. S.,	Los Angeles.....	9
Alesen, L. A.,	Los Angeles.....	9
Alexander, A. A.,	Oakland.....	1
Alexander, E. W.,	San Francisco.....	22
Alexander, E.,	Oakdale.....	33
Alexander, H. H.,	San Francisco.....	26
Alexander, J. H.,	Chico.....	2
Alexander, R. L.,	Ontario.....	20
Allan, J. T. M.,	Los Angeles.....	9
Allen, A. B.,	Los Angeles.....	9
Allen, A.,	San Pedro.....	9
Allen, C. S.,	Los Angeles.....	9
Allen, C. L.,	Los Angeles.....	9
Allen, D. M.,	Oakland.....	1
Allen, E. G.,	Patterson.....	33
Allen, F. M.,	San Diego.....	21
Allen, H. W.,	San Francisco.....	22
Allen, J.,	Raymond.....	4
Allen, J. R.,	Los Angeles.....	9
Allen, M. R.,	Pairfax.....	10
Allen, O. K.,	San Francisco.....	22
Allen, P. K.,	San Diego.....	21
Allen, W. B.,	Oakland.....	1
Aller, D. I.,	Fresno.....	4
Allison, C. N.,	San Diego.....	21
Alsberge, E. W.,	Glendale.....	9
Alter, S. M.,	Los Angeles.....	9
Althausen, T. L.,	San Francisco.....	22
Alton, W. A.,	San Diego.....	21
Alvarez, L. F.,	Los Angeles.....	9

NAME	COUNTY	SOCIETY NO.
Alward, H. C.,	Los Angeles.....	9
Amaral, E. A.,	San Jose.....	27
Ambrose, C. S.,	Los Angeles.....	9
Ames, E. W.,	Los Angeles.....	9
Ammann, F. X., Jr.,	Los Angeles.....	9
Amisbaugh, A. E.,	San Francisco.....	22
Anderson, A. C.,	Petaluma.....	32
Anderson, A. V.,	Pasadena.....	9
Anderson, A. E.,	Fresno.....	4
Anderson, C. E.,	Los Angeles.....	9
Anderson, C. W.,	Los Angeles.....	9
Anderson, C. M.,	Hermosa Beach.....	9
Anderson, E. L.,	Los Angeles.....	9
Anderson, F. N.,	Los Angeles.....	9
Anderson, F. R.,	Campbell.....	27
Anderson, H. H.,	San Francisco.....	22
Anderson, H. E.,	Culver City.....	9
Anderson, H., Jr.,	Los Angeles.....	9
Anderson, H. C.,	Pomona.....	9
Anderson, J. F.,	Los Angeles.....	9
Anderson, L. N.,	Inglewood.....	9
Anderson, N. P.,	Los Angeles.....	9
Anderson, O.,	Santa Monica.....	9
Anderson, S. B.,	Burbank.....	9
Anderson, W. N.,	Los Angeles.....	9
Anderton, H. S.,	San Diego.....	21
Andre, E. M.,	Los Angeles.....	9
Andrews, H. J.,	Hollywood.....	9
Andrews, H.,	Los Angeles.....	9
Andrews, H. F.,	San Diego.....	21
Andrews, J. N.,	Los Angeles.....	9
Andrews, V. L.,	Los Angeles.....	9
Andrus, L. M.,	King City.....	13
Ankele, C. W.,	Sacramento.....	18
Annis, A. J.,	Los Angeles.....	9
Anthony, E. H.,	Los Angeles.....	9
Anton, F. L.,	Los Angeles.....	9
Apostolides, E.,	San Francisco.....	22
Apple, W. W.,	El Centro.....	6
Appeldorn, H. H.,	Oakland.....	1
Arbuthnot, R. E.,	Glendale.....	9
Archart, A. A.,	Monterey.....	13
Arkush, A. S.,	Santa Monica.....	9
Armen, G. H.,	Los Angeles.....	9
Armistead, H. V.,	Newman.....	33
Armitstead, R. B.,	Ventura.....	37
Armstrong, A. C.,	San Francisco.....	22
Armstrong, E. L.,	Los Angeles.....	9
Armstrong, M. I.,	Berkeley.....	1
Armstrong, M. M.,	Los Angeles.....	9
Armstrong, V. C.,	Los Angeles.....	9
Arnold, C. H.,	San Francisco.....	22
Arnold, F. L.,	Long Beach.....	9
Arnold, H. J.,	Milpitas.....	27
Arnold, H. R.,	San Francisco.....	22
Arnold, M. H.,	San Diego.....	21
Arnold, W. F.,	Long Beach.....	9
Arnot, P. H.,	San Francisco.....	22
Arnov, B.,	Los Angeles.....	9
Ash, R. L.,	San Francisco.....	22
Ashcroft, F. E.,	Chula Vista.....	21
Ashley, N. N.,	Oakland.....	1
Ashley, R. E.,	San Francisco.....	22
Askey, E. V.,	Los Angeles.....	9
Askey, J. M.,	Los Angeles.....	9
Atkinson, C. E.,	Banning.....	17
Atkinson, D. W.,	San Francisco.....	22
Atkinson, R. C.,	Weimar.....	16
Atsatt, R. F.,	Santa Barbara.....	26
Attwood, W. G.,	Los Angeles.....	9
Atwood, A. C.,	Chowchilla.....	12
Atwood, H. A.,	Riverside.....	17
Audrain, L. C.,	Los Angeles.....	9
Auerback, L. B.,	Hollywood.....	9
Auslen, H.,	Oakland.....	1
Austin, L. C.,	Los Angeles.....	27
Austin, M. O.,	San Francisco.....	22
Austin, T. C.,	Bakersfield.....	7
Avery, J. W.,	Hollywood.....	9
Avery, W. J.,	Fresno.....	4
Axline, J. T.,	North Hollywood.....	9
Ayer, E. W.,	Oakland.....	1
Ayer, P. E.,	Los Angeles.....	9
Ayers, T. F.,	San Francisco.....	22
Ayres, S., Jr.,	Los Angeles.....	9
Ayres, W.,	Los Angeles.....	9
Azevedo, M. L.,	Sacramento.....	18

B

Babcock, D. W.,	Placerville.....	18
Babcock, D. T.,	Los Angeles.....	9
Babcock, E. S., Jr.,	Sacramento.....	18
Babcock, H. C.,	San Diego.....	21

COUNTY			COUNTY			COUNTY		
NAME	COUNTY	SOCIETY NO.	NAME	COUNTY	SOCIETY NO.	NAME	COUNTY	SOCIETY NO.
Babcock, J. W., <i>Placerville</i>		18	Baxter, F. S., <i>Oakland</i>		1	Bill, P. A., <i>San Francisco</i>		22
Babcock, L. G., <i>Vernon</i>		9	Baxter, G. H., <i>Oakland</i>		1	Billingsley, U. C., <i>Oakland</i>		1
Babcock, R. A., <i>Willits</i>		11	Bay, S. G., <i>Los Angeles</i>		9	Bilon, L. V., <i>Los Angeles</i>		9
Babienco, A. T., <i>San Diego</i>		21	Bayar, L. M., <i>San Francisco</i>		22	Bine, R., <i>San Francisco</i>		22
Babington, S. H., <i>Berkeley</i>		1	Bayley, W. A., <i>Los Angeles</i>		9	Bingaman, E. W., <i>Salinas</i>		13
Bachelor, B. B., <i>Sebastopol</i>		32	Baylis, J. N., <i>San Bernardino</i>		20	Bingaman, W. H., <i>Salinas</i>		13
Bacher, J. A., <i>San Francisco</i>		22	Beach, E. W., <i>Sacramento</i>		18	Binkley, R. W., <i>Seima</i>		4
Bachhuber, C. A., <i>Los Angeles</i>		9	Bear, N. K., <i>Riverside</i>		17	Binkley, T., <i>Sacramento</i>		18
Bachmann, G. W., <i>Santa Monica</i>		9	Beard, J. L., <i>Martinez</i>		3	Bird, A. A., <i>Oakland</i>		1
Bacigalupi, L. D., <i>San Francisco</i>		22	Beardslee, A., <i>San Francisco</i>		22	Bishop, C. R., <i>Long Beach</i>		9
Bacon, D. N., <i>Bakersfield</i>		7	Beasley, E. M., <i>Santa Ana</i>		15	Birkenstock, C. F., <i>San Diego</i>		21
Bacon, L. H., <i>San Bernardino</i>		20	Beasley, H. E., <i>Los Angeles</i>		9	Birkenstock, E. F., <i>San Diego</i>		26
Bacon, L. C., <i>Beverly Hills</i>		9	Beattie, D. A., <i>San Jose</i>		27	Bishop, C. O., <i>Richmond</i>		3
Baer, H., <i>Elsinore</i>		17	Beattie, Hugh, <i>Elk Grove</i>		18	Bishop, T. W., <i>S. Pasadena</i>		9
Baetz, W. G., <i>Huntington Park</i>		9	Beattie, J. I., <i>San Jose</i>		27	Bishop, T. E., <i>San Diego</i>		21
Bahrenburg, G. E., <i>Bakersfield</i>		7	Beattie, W. A., <i>Sacramento</i>		18	Bittner, C. L., <i>Sacramento</i>		18
Bailey, C. O., <i>Los Angeles</i>		9	Beatty, H. J., <i>Hollywood</i>		9	Bittner, L. H., <i>Glendale</i>		9
Bailey, F. J., <i>Red Bluff</i>		34	Beatty, J. D., <i>Los Angeles</i>		9	Bittner, S. P., <i>Glendale</i>		9
Bailey, W., <i>San Francisco</i>		22	Beauchamp, H. H., <i>Sacramento</i>		18	Bixby, E. M., <i>San Francisco</i>		22
Bailly, T. E., <i>San Francisco</i>		22	Beaudoux, H. A., <i>Oakland</i>		1	Black, B. W., <i>Oakland</i>		1
Baiocchi, A. J., <i>San Jose</i>		27	Beaver, H. J., <i>Palo Alto</i>		27	Black, E. C., <i>San Diego</i>		21
Baird, C. G., <i>Santa Maria</i>		26	Beaver, M. G., <i>Redlands</i>		20	Black, H., <i>Palo Alto</i>		27
Baird, H. R., <i>Sacramento</i>		18	Beck, H. H., <i>Corning</i>		34	Blackfield, H. M., <i>San Francisco</i>		22
Bak E. W., <i>Los Angeles</i>		9	Beck, H. R., <i>Los Angeles</i>		9	Blackmun, E. L., <i>Stockton</i>		23
Baker, C. D., <i>Los Angeles</i>		9	Beck, J. A., <i>Salinas</i>		13	Blackshaw, J. B., <i>Oakland</i>		3
Baker, G. L., <i>San Francisco</i>		22	Beck, J. E., <i>Tulare</i>		35	Blaine, E. S., <i>Los Angeles</i>		9
Baker, H. V., <i>Napa</i>		14	Becka, S. J., <i>Los Angeles</i>		9	Blaisdell, F. E., Jr., <i>Watsonville</i>		28
Baker, John J., <i>West Los Angeles</i>		9	Becker, G. H., <i>San Francisco</i>		22	Blake, C. R., <i>Richmond</i>		3
Baker, M. D., <i>Santa Ana</i>		15	Becker, H. F., <i>Los Angeles</i>		9	Blanchard, L. H., <i>Oakland</i>		1
Baker, M. D., <i>San Jose</i>		27	Beckett, W. W., <i>Los Angeles</i>		9	Blanchard, T. L., <i>San Jose</i>		27
Baker, R. W., <i>Los Angeles</i>		9	Beckett, W. J., <i>New York</i>		9	Bland, C., <i>Long Beach</i>		9
Baker, W. P., <i>Santa Ana</i>		15	Bedri, J. L., <i>Salinas</i>		13	Blank, B., <i>Los Angeles</i>		9
Bakewell, B., <i>Santa Barbara</i>		26	Beebe, J. L., <i>Anaheim</i>		15	Blatherwick, A. A., <i>Los Angeles</i>		9
Baldwin, A. K., <i>Long Beach</i>		9	Beebe, L. J., <i>Santa Maria</i>		26	Blatherwick, G. W., <i>Los Angeles</i>		9
Baldwin, L. G., <i>Pasadena</i>		9	Beede, A. H., <i>Walnut Creek</i>		3	Blecker, R. F., <i>Fresno</i>		4
Balkins, A. J., <i>Los Angeles</i>		9	Beekler, A. M., <i>Santa Maria</i>		26	Bleeker, John J., <i>Pasadena</i>		9
Ball, C. D., <i>Santa Ana</i>		15	Boem, M., <i>Los Angeles</i>		9	Blevins, W. J., <i>Woodland</i>		38
Ball, D. R., <i>Santa Ana</i>		15	Beerman, H. M., <i>Los Angeles</i>		9	Blinn, J. F., <i>Stockton</i>		23
Ball, H. A., <i>San Diego</i>		21	Beerman, W. F., <i>San Francisco</i>		22	Bliss, G. L., <i>Long Beach</i>		9
Ball, J. D., <i>San Francisco</i>		22	Behne, K. F., <i>Los Angeles</i>		9	Bliss, W. P., <i>Pasadena</i>		9
Ball, J. D., <i>Santa Ana</i>		15	Behneman, H. M. F., <i>San Francisco</i>		22	Bloch, J. L., <i>San Pedro</i>		9
Ballard, C. H., <i>Santa Monica</i>		9	Beigelman, M., <i>Los Angeles</i>		9	Block, C. A., <i>San Francisco</i>		22
Ballard, S. E., <i>Long Beach</i>		9	Belford, W. W., <i>San Diego</i>		21	Blodgett, H. H., <i>Beverly Hills</i>		9
Balsley, J. A., <i>Los Angeles</i>		9	Belgum, H. N., <i>Richmond</i>		3	Blodgett, W. LeR., <i>Calistoga</i>		14
Baltimore, L., <i>Los Angeles</i>		9	Bell, H. D., <i>Oakland</i>		1	Blondin, E. A., <i>Ramona</i>		21
Balyeat, F. S., <i>Los Angeles</i>		9	Bell, H. G., <i>San Francisco</i>		22	Blong, P. H., <i>Alhambra</i>		9
Bames, H. O., <i>Los Angeles</i>		9	Bell, H. W., <i>Bakersfield</i>		7	Blood, J. N., <i>Redwood City</i>		25
Bancroft, I. R., <i>Los Angeles</i>		9	Bell, L. P., <i>Sacramento</i>		38	Bloomfield, A. L., <i>San Francisco</i>		22
Bandelier, R. H., <i>Los Angeles</i>		9	Bell, M. T., <i>Ventura</i>		37	Blum, S., <i>San Francisco</i>		27
Banks, A. E., <i>San Diego</i>		21	Bell, T. F., <i>Oakland</i>		1	Blumenthal, E. L., <i>Oakland</i>		1
Banks, W. H., <i>San Francisco</i>		22	Bell, W. L., <i>Oakland</i>		1	Bly, F. H., <i>Red Bluff</i>		34
Bantum, F. M., <i>Los Angeles</i>		9	Bellin, J. J., <i>Los Angeles</i>		9	Boardman, W. W., <i>San Francisco</i>		22
Barber, E. M., <i>Oakland</i>		1	Belove, B., <i>Los Angeles</i>		9	Bobbitt, J. D., <i>San Diego</i>		21
Barber, P. S., <i>Porterville</i>		35	Belt, A. E., <i>Los Angeles</i>		9	Bock, C., <i>Los Angeles</i>		9
Barbour, N. P., <i>Stockton</i>		23	Belt, R. L., <i>Montrose</i>		9	Boe, M. R., <i>Alameda</i>		1
Barclay, H. A., <i>San Diego</i>		21	Belyea, J. H., <i>Los Molinos</i>		34	Boeck, W. C., <i>Los Angeles</i>		9
Bardill, J. W., <i>Ventura</i>		37	Bender, W. L., <i>San Francisco</i>		22	Boehm, C. A., <i>San Francisco</i>		22
Barkan, A., <i>Zurich</i>		22	Bendlage, G. A., <i>Long Beach</i>		9	Boehm, M. L., <i>Los Angeles</i>		9
Barkan, H., <i>San Francisco</i>		22	Benner, E. A., <i>San Mateo</i>		25	Boehmer, A. C., <i>Lodi</i>		23
Barkan, O., <i>San Francisco</i>		22	Bennett, C. B., <i>Berkeley</i>		1	Boericke, C. C., <i>Berkeley</i>		1
Barlow, W. J., <i>Los Angeles</i>		9	Bennett, C. L., <i>Los Angeles</i>		9	Boetticher, E. O., <i>Los Angeles</i>		9
Barnard, F. S., <i>Los Angeles</i>		9	Bennett, D. W., <i>San Francisco</i>		22	Boge, H. G. C., <i>Oakland</i>		1
Barnard, H. D., <i>Los Angeles</i>		9	Bennett, E. L., <i>Fresno</i>		4	Bogen, E., <i>Olive View</i>		9
Barnard, L. B., <i>Oakland</i>		1	Bennett, E. C., <i>Ukiah</i>		11	Bogle, S. S., <i>Santa Rosa</i>		32
Barnes, J. W., <i>Stockton</i>		23	Bennett, E. S., <i>Los Angeles</i>		9	Bolan, A. E., <i>Los Angeles</i>		9
Barnes, L. B., <i>Newcastle</i>		16	Bennett, L. B., <i>Los Angeles</i>		9	Boldemann, L., <i>San Francisco</i>		22
Barnes, P. D., <i>Loomis</i>		16	Bennett, M. C., <i>Berkeley</i>		1	Boles, A., <i>Oakland</i>		1
Barnes, R. W., <i>Los Angeles</i>		9	Bennett, M. G. E., <i>El Monte</i>		9	Bolin, Z. E., <i>San Francisco</i>		22
Barnes, S. D., <i>Los Angeles</i>		9	Bennett, W. W., <i>Los Angeles</i>		9	Bolinger, H. J., <i>Lodi</i>		23
Barnes, W. H., <i>Oakland</i>		1	Bennetts, F. A., <i>Los Angeles</i>		9	Boller, S., <i>Los Angeles</i>		9
Barnett, C. W., <i>San Francisco</i>		22	Benninger, C., Jr., <i>San Francisco</i>		22	Bollig, H. L., <i>Los Angeles</i>		9
Barnett, E. D., <i>Santa Rosa</i>		32	Benson, C. B., <i>Modesto</i>		33	Bolstad, H. C., <i>Oakland</i>		1
Barnett, G. D., <i>San Francisco</i>		27	Benson, E. H., <i>Talmage</i>		11	Bolze, E. H., <i>San Francisco</i>		22
Barney, E. L., <i>San Francisco</i>		22	Benton, J. J., <i>Oakland</i>		1	Bond, A. M., <i>Los Angeles</i>		9
Barney, T. R., <i>San Francisco</i>		22	Bepler, A. C., <i>San Francisco</i>		22	Bond, A. L., <i>Lindsay</i>		35
Barnhart, W., <i>Los Angeles</i>		9	Berauer, J. M., <i>Los Angeles</i>		9	Bond, E. C., <i>Hanford</i>		35
Baron, P. P., <i>Alameda</i>		30	Berejkoff, K. I., <i>San Francisco</i>		22	Bond, R. E., <i>Los Angeles</i>		9
Barr, A. L., <i>San Diego</i>		21	Berg, A., <i>San Francisco</i>		22	Bonfiglio, J., <i>Hollywood</i>		9
Barr, W. T., <i>Fresno</i>		4	Berg, G. O., <i>Hollywood</i>		9	Bonfiglio, V., <i>Los Angeles</i>		9
Barrett, G. M., <i>San Francisco</i>		22	Berge, F. E., <i>Los Angeles</i>		9	Bonn, H. K., <i>Los Angeles</i>		9
Barrette, L. C., <i>Sacramento</i>		18	Berger, A. A., <i>San Francisco</i>		22	Bonoff, K. M., <i>Los Angeles</i>		9
Barron, H. C., Jr., <i>Escondido</i>		9	Berger, G., <i>Los Angeles</i>		9	Bonta, M. B., <i>Los Angeles</i>		9
Barron, H. M., <i>Los Angeles</i>		9	Bergstrom, F. K., <i>Los Angeles</i>		9	Bonthius, A., <i>Pasadena</i>		9
Barron, O. B., <i>Ferndale</i>		5	Berkes, H. A., <i>Los Angeles</i>		9	Donura, F., <i>Los Angeles</i>		9
Barrow, J. V., <i>Los Angeles</i>		9	Berkley, H. K., <i>Los Angeles</i>		9	Bonyngne, C. W., <i>Los Angeles</i>		9
Barrow W. H., <i>San Diego</i>		21	Berkove, S. E., <i>Oakland</i>		1	Boonshaft, L., <i>Santa Clara</i>		27
Barry, G. L., <i>San Jose</i>		27	Berman, P., <i>Los Angeles</i>		9	Booth, J. A., <i>San Mateo</i>		25
Bartle, I. B., <i>San Luis Obispo</i>		24	Bernardini, C. V., <i>San Diego</i>		21	Booth, M. M., <i>St. Helena</i>		14
Bartholomew, J. Y., <i>San Francisco</i>		22	Bernstein, A., <i>San Francisco</i>		22	Bormann, G. B., <i>Hollywood</i>		9
Bartholomew, T. E., <i>Calxico</i>		6	Berry, A. J., <i>Los Angeles</i>		9	Boskowitz, G. H., <i>San Francisco</i>		22
Bartlett, E. I., <i>San Francisco</i>		22	Berry, B. S., <i>Santa Maria</i>		26	Bost, C., <i>San Francisco</i>		22
Barton, E. W., <i>Alhambra</i>		9	Bertero, J., <i>Santa Maria</i>		26	Bost, F. C., <i>San Francisco</i>		22
Bascom, F. S., <i>Oakland</i>		1	Bertola, M., <i>San Francisco</i>		22	Bosworth, H. W., <i>Los Angeles</i>		9
Bates, C. E. H., <i>San Francisco</i>		22	Best, E. J., <i>San Francisco</i>		22	Botsford, M. E., <i>San Francisco</i>		22
Bates, M., <i>Santa Ana</i>		15	Bettercourt, M. F., <i>Watsonville</i>		28	Bourbon, O. P., <i>Los Angeles</i>		9
Bates, W. E., <i>Davis</i>		38	Bettin, M. E., <i>Los Angeles</i>		9	Bourn, J. J., <i>San Jose</i>		27
Bathurst, E. W., <i>Etna</i>		30	Betts, I. H., <i>Visalia</i>		35	Bowen, C. B., <i>Oakland</i>		1
Baughman, W. H., <i>Oakland</i>		1	Bewley, M. H., <i>Los Angeles</i>		9	Bowen, D. S., <i>Los Angeles</i>		9
Baumgaertner, O. C., <i>Los Angeles</i>		9	Bianchi, J., <i>Ventura</i>		37	Bowen, H. A., <i>Los Angeles</i>		9
Baumgartner, C. J., <i>Los Angeles</i>		9	Bice, C. W., <i>Oakland</i>		1	Bowen, F. P., <i>Los Angeles</i>		9
Bautista, M. D., <i>Stockton</i>		23	Bieler, H. G., <i>Pasadena</i>		9	Bowen, W. P., <i>Lindsay</i>		35
Baxter, C. P., <i>San Diego</i>		21	Bierman, J. M., <i>San Francisco</i>		22	Bower, A. G., <i>Glendale</i>		9
Baxter, D. E., <i>Glendale</i>		9	Bigby, M. H., <i>Whittier</i>		9	Bowers, C. H., <i>Los Angeles</i>		9
			Biggs, E. L., <i>Los Angeles</i>		9	Bowers, P. E., <i>Los Angeles</i>		9

NAME	COUNTY	COUNTY SOCIETY NO.	NAME	COUNTY	COUNTY SOCIETY NO.	NAME	COUNTY	COUNTY SOCIETY NO.
Bowers, W. S., <i>Los Angeles</i>		9	Brumwell, D., <i>King City</i>		13	Cahoon, G. W., <i>Los Angeles</i>		9
Bowles, A. M., <i>Santa Rosa</i>		32	Brunemeier, E. H., <i>Placentia</i>		15	Cain, W. T., <i>Gardena</i>		9
Bowles, F. H., <i>Oakland</i>		1	Bruner, F. M., <i>Ferndale</i>		5	Calaway, A. A., <i>Fresno</i>		4
Bowman, P. J., <i>Fort Bragg</i>		11	Brunie, L. J., <i>Santa Barbara</i>		26	Calder, D. H., <i>Los Angeles</i>		9
Bowman, R. J., <i>Los Angeles</i>		9	Brunie, Y. S., <i>Los Angeles</i>		26	Calkins, J. W., <i>Oakland</i>		1
Boyce, L., <i>Los Angeles</i>		9	Brunn, H., <i>San Francisco</i>		22	Callander, C. L., <i>San Francisco</i>		22
Boyce, W. A., <i>Los Angeles</i>		9	Brusco, H. D., <i>San Francisco</i>		22	Callaway, W. O., <i>Burlingame</i>		25
Boyd, E. G., <i>Los Angeles</i>		9	Brush, N. H., <i>Santa Barbara</i>		26	Callison, F. W., <i>San Francisco</i>		22
Boyd, E. F., <i>Los Angeles</i>		9	Brust, P. R., <i>San Diego</i>		21	Calvi, P. J., <i>San Francisco</i>		22
Boyd, J. P., <i>Santa Ana</i>		15	Bryan, L., <i>San Francisco</i>		22	Calvin, G. F., <i>Oakland</i>		1
Boyd, R. T., <i>San Francisco</i>		22	Bryant, D. C., <i>Claremont</i>		9	Cameron, L. C., <i>Santa Ana</i>		15
Boyd, T. O., <i>Long Beach</i>		9	Bryant, E. A., <i>Los Angeles</i>		9	Cameron, M. C., <i>Los Angeles</i>		9
Boyd, W. H., <i>Long Beach</i>		9	Bryant, H. E., <i>Los Angeles</i>		9	Camp, J. W., <i>La Habra</i>		15
Boyer, H. R., <i>Glendale</i>		9	Buchanan, R. A., <i>Lodi</i>		23	Campbell, C. R., <i>San Jose</i>		27
Boyer, J. I., <i>Long Beach</i>		9	Bucher, W. H., <i>Oliver View</i>		9	Campbell, C. C., <i>Long Beach</i>		9
Boyer, K. H., <i>Los Angeles</i>		9	Buck, L. W., <i>San Francisco</i>		22	Campbell, G. E., <i>Pasadena</i>		9
Boyers, L. M., <i>Berkeley</i>		1	Buckell, A. E. T., <i>Oakland</i>		1	Campbell, H. G., <i>Lindsay</i>		35
Braafladt, L. H., <i>North Sacramento</i>		18	Buckingham, J. R., <i>Los Angeles</i>		9	Campbell, H. S., <i>Los Angeles</i>		9
Bradfield, J. H., <i>Monterey</i>		13	Buckley, E. J., <i>San Francisco</i>		22	Campbell, J. V., <i>Oakland</i>		1
Bramhall, R. N., <i>Sacramento</i>		18	Buckley, T. I., <i>Oakland</i>		1	Campbell, J., <i>Pasadena</i>		9
Bramkamp, A. L., <i>Banning</i>		17	Bucknam, R. W., <i>Hollywood</i>		9	Campbell, L. G., <i>Pasadena</i>		9
Bramwell, L., <i>Orange</i>		15	Budge, E. S., <i>Los Angeles</i>		9	Campbell, L. D., <i>San Jose</i>		27
Branch, W. E., <i>Los Angeles</i>		9	Bull, E. C., <i>San Francisco</i>		22	Campbell, L. S., <i>Los Angeles</i>		9
Brandel, H. M., <i>Los Angeles</i>		9	Bullard, C. T., <i>King City</i>		13	Campbell, M. P., <i>San Francisco</i>		22
Brandes, L., <i>Los Angeles</i>		9	Bullington, P. F., <i>Chico</i>		2	Campbell, M., <i>Los Angeles</i>		9
Brandt, F. H., <i>Los Angeles</i>		9	Bullis, J. A. E., <i>Los Angeles</i>		9	Campbell, V. E., <i>Fresno</i>		4
Brastad, J. P., <i>Anaheim</i>		15	Bullis, R. O., <i>Los Angeles</i>		9	Campbell, W. H., <i>Santa Barbara</i>		26
Brazelton, H., <i>Oakland</i>		1	Bullitt, J. B., <i>San Jose</i>		27	Campiche, P. S., <i>San Francisco</i>		22
Breed, L. M., <i>Pasadena</i>		9	Bullock, A. S., <i>Alhambra</i>		9	Canby, C. B., <i>Van Nuys</i>		9
Breitman, H. B., <i>Los Angeles</i>		9	Bulpitt, H. G., <i>Santa Monica</i>		9	Canelo, C. K., <i>San Jose</i>		27
Breitstein, L. I., <i>San Francisco</i>		22	Bulpitt, J. M., <i>Santa Ana</i>		15	Cannon, F. M., <i>Point Reyes</i>		10
Brem, W. V., <i>Los Angeles</i>		9	Bulpitt, P. A., <i>Santa Monica</i>		9	Cantoni, A. J., <i>San Diego</i>		21
Brendel, F. P., <i>Sacramento</i>		18	Bulpitt, Z. E. N., <i>Santa Ana</i>		15	Card, T. A., <i>Riverside</i>		17
Breslin, F. J., <i>Los Angeles</i>		9	Bulson, C. H., <i>Napa</i>		14	Carden, J. J., <i>San Francisco</i>		1
Brewer, L. C., <i>Los Angeles</i>		9	Bumgarner, G. M., <i>Richmond</i>		3	Carey, G. H., <i>Los Angeles</i>		9
Breyer, J. H., <i>Pasadena</i>		9	Bumgarner, J. W., <i>Richmond</i>		3	Carey, H. B., <i>San Francisco</i>		22
Bricca, C. R., <i>San Francisco</i>		22	Bunnell, S., <i>San Francisco</i>		22	Carey, T. S., <i>Los Angeles</i>		9
Brier, I. P., <i>Oliver View</i>		9	Burchardi, K. G. H., <i>Los Angeles</i>		9	Carhart, E. C., <i>Hollywood</i>		9
Briggs, G. A., <i>Sacramento</i>		18	Burchfiel, C. M., <i>San Jose</i>		27	Carlile, M. N., <i>Lakeside</i>		21
Briggs, LeR H., <i>San Francisco</i>		22	Burden, H. S., <i>Sacramento</i>		18	Carlson C. M., <i>Santa Rosa</i>		32
Briggs, W. R., <i>Sacramento</i>		18	Burg, B., <i>Oakland</i>		1	Carlson, E., <i>San Francisco</i>		22
Briggs, W. M., <i>Monrovia</i>		9	Burgan, J. H., <i>Los Angeles</i>		9	Carlson, F. J., <i>Oakland</i>		1
Brigham, E., <i>Dinuba</i>		35	Burge, M. H., <i>Los Angeles</i>		9	Carmack, J. C., <i>San Bernardino</i>		20
Brill, W., <i>Los Angeles</i>		9	Burger, F. A., <i>El Centro</i>		6	Carpenter, F. L., <i>Berkeley</i>		1
Brinckerhoff, E. E., <i>Oakland</i>		1	Burger, T. O., <i>San Diego</i>		21	Carpenter, H. C., <i>Berkeley</i>		1
Briner, C. C., <i>Auburn</i>		16	Burgeson, S. D., Jr., <i>Los Angeles</i>		9	Carpenter, H. L., <i>Richmond</i>		3
Briner, M. S., <i>Lincoln</i>		16	Burgess, G. W., <i>Guerneville</i>		32	Carroll, J. J., <i>San Francisco</i>		22
Broaddus, C. A., <i>Stockton</i>		23	Burk, C. E., <i>Loma Linda</i>		20	Carroll, W. A., <i>San Francisco</i>		22
Brockow, J. L., <i>Los Angeles</i>		9	Burk, E. E., <i>Los Angeles</i>		9	Carson, D. A., <i>San Francisco</i>		22
Brockway, A., <i>Los Angeles</i>		9	Burke, A. M. B., <i>Alameda</i>		1	Carson, G. R., <i>San Francisco</i>		22
Brodovsky, D., <i>San Jose</i>		27	Burke, D. V., <i>Berkeley</i>		1	Carter, A. E., <i>North Hollywood</i>		9
Broemser, M. A., <i>San Jose</i>		4	Burke, E. W., <i>Redlands</i>		20	Carter, C. E., <i>Pasadena</i>		9
Bronfeld, N., <i>Los Angeles</i>		9	Burke, G. R., <i>Alameda</i>		1	Carter, F. H., <i>San Diego</i>		21
Brooks, C. S., <i>El Centro</i>		6	Burkelman, A., <i>Los Angeles</i>		9	Carter, M. G., <i>Los Angeles</i>		9
Brooks, E. R., <i>Canino</i>		1	Burkett, R. C., <i>Los Angeles</i>		9	Carter, R. A., <i>Los Angeles</i>		9
Brooks, H. T., <i>Alhambra</i>		9	Burkhardt, W. G., <i>San Francisco</i>		22	Carter, R. S., <i>San Diego</i>		21
Brooks, LeR., <i>San Francisco</i>		22	Burks, F. L. R., <i>Fresno</i>		4	Carter, W. E., <i>San Francisco</i>		1
Brooks, T. C., <i>Los Angeles</i>		9	Burlew, J. M., <i>Santa Ana</i>		15	Carter, W. N., <i>Los Angeles</i>		9
Bross, R. B., <i>Los Angeles</i>		9	Burlingame, R. W., <i>San Francisco</i>		22	Cartmell, T. M., <i>Los Angeles</i>		9
Broughton, G. A., <i>Ventura</i>		37	Burnap, S. R., <i>Los Angeles</i>		9	Cartwright, E. W., <i>Oceanside</i>		21
Brown, A., <i>San Francisco</i>		22	Burnett, C. I., <i>Susanville</i>		8	Carver, W. F., <i>Hollywood</i>		9
Brown, A. L., <i>Riverside</i>		17	Burnham, C. J., <i>Berkeley</i>		1	Cary, N. A., <i>Oakland</i>		1
Brown, A. L., <i>San Francisco</i>		22	Burnham, C. J., Jr., <i>Berkeley</i>		1	Case, C. E., <i>Santa Maria</i>		26
Brown, B., <i>Sacramento</i>		18	Burnham, DeW., K., <i>San Francisco</i>		22	Casey, T. J., <i>Oakland</i>		1
Brown, B. P., <i>Los Angeles</i>		9	Burnham, P. S., <i>Los Angeles</i>		9	Caskey, C. R., <i>Los Angeles</i>		9
Brown, B. C. B., <i>Los Angeles</i>		9	Burns, E. M., <i>Huntington Park</i>		9	Casper, E. J., <i>San Francisco</i>		22
Brown, C., <i>San Francisco</i>		22	Burns, G. C., <i>Los Angeles</i>		9	Casse, D., <i>Los Angeles</i>		9
Brown, C. W., <i>San Diego</i>		21	Burns, T. S., <i>San Francisco</i>		22	Cassell, I., <i>San Francisco</i>		27
Brown, C. W., <i>San Diego</i>		21	Burnside, C., <i>Hollywood</i>		9	Catton, J., <i>San Francisco</i>		22
Brown, C. M., <i>Los Angeles</i>		9	Burrall, G. M., <i>Los Angeles</i>		9	Cave, H. A., <i>San Diego</i>		21
Brown, D. F., <i>Redwood City</i>		25	Burrows, C. A., <i>Los Angeles</i>		9	Cavanaugh, L. A., <i>Santa Barbara</i>		26
Brown, E. O., <i>Sacramento</i>		18	Burrows, J. R., <i>San Francisco</i>		22	Cecil, A. B., <i>Los Angeles</i>		9
Brown, F. A., <i>Santa Ana</i>		15	Burrows, L. A., <i>Los Angeles</i>		9	Cecil, J. J., <i>Patton</i>		20
Brown, F. A., <i>Hayward</i>		1	Burrows, M. T., <i>Pasadena</i>		9	Cerf, A. E., <i>San Francisco</i>		22
Brown, G. D., <i>Pomona</i>		9	Bursell, A., <i>Mountain View</i>		27	Chaffee, B. S., <i>Long Beach</i>		9
Brown, G. W., <i>Los Angeles</i>		9	Burtess, H. I., <i>Santa Barbara</i>		26	Chaffin, G. L., <i>Los Angeles</i>		9
Brown, H. V., <i>Glendale</i>		9	Burton, F. A., <i>San Diego</i>		21	Chaffin, R. C., <i>Los Angeles</i>		9
Brown, H. A., <i>San Francisco</i>		22	Burwell, L. C., <i>Los Angeles</i>		9	Chaimov, A. S., <i>San Francisco</i>		22
Brown, H. A., <i>Berkeley</i>		1	Busby, J. L., <i>Pasadena</i>		9	Chain, J. N., <i>Eureka</i>		5
Brown, H. C., <i>San Jose</i>		27	Bush, H. C., <i>Livermore</i>		1	Chaloupka, H. R., <i>Los Angeles</i>		9
Brown, J. C., <i>Los Angeles</i>		9	Buskirk, W. H., <i>Los Angeles</i>		9	Chamberlain, B. H., <i>Alhambra</i>		9
Brown, J. M., <i>Los Angeles</i>		9	Bussey, D. G., <i>Avalon</i>		9	Chamberlain, E. F., <i>San Diego</i>		21
Brown, J. R., <i>Los Angeles</i>		9	Butin, M. R., <i>Madera</i>		4	Chamberlain, G. L., <i>Oakland</i>		1
Brown, M. H., <i>Los Angeles</i>		9	Butka, L. J., <i>Alhambra</i>		9	Chamberlain, W. E., <i>Philadelphia</i>		22
Brown, N. N., <i>Bakersfield</i>		7	Butler, E., <i>San Francisco</i>		22	Chamberlin, H. H., <i>Glendora</i>		9
Brown, P. K., <i>San Francisco</i>		22	Butler, F. O., <i>Eldridge</i>		32	Chambers, S. O., <i>Los Angeles</i>		9
Brown, R., <i>Santa Barbara</i>		26	Butler, K. W., <i>Madera</i>		4	Chambers, W. E., <i>Kansas City</i>		1
Brown, R., <i>San Francisco</i>		22	Butler, O. W., <i>Los Angeles</i>		9	Champion, J. A., <i>Colton</i>		20
Brown, R. H., <i>Pasadena</i>		9	Butler, W. D., <i>San Luis Obispo</i>		24	Chandler, L. R., <i>San Francisco</i>		22
Brown, T. H., <i>Orland</i>		38	But, E. G., <i>Redondo Beach</i>		9	Chaney, L. A., <i>Los Angeles</i>		9
Brown, W. H., <i>Palo Alto</i>		27	Butterfield, A. DeF., <i>National City</i>		21	Chang, D. K., <i>San Francisco</i>		22
Brown, W. K., <i>San Diego</i>		21	Butterfield, E. R., <i>Burbank</i>		9	Channell, W. L., <i>Oakland</i>		1
Browne, F. E., <i>Los Angeles</i>		9	Byers, W. M., <i>Van Nuys</i>		9	Chapline, F. L., <i>Orange</i>		15
Browne, G. C., <i>Oakland</i>		1	Byington, F. S., <i>Los Angeles</i>		9	Chapman, G. E., <i>San Francisco</i>		22
Brownfield, W. H., <i>Los Angeles</i>		9	Byington, P. C., <i>Modesto</i>		33	Chapman, H. S., <i>Stockton</i>		23
Browning, C. C., <i>San Marino</i>		9	Byrnes, R. L., <i>Los Angeles</i>		9	Chapman, J. L., <i>Los Angeles</i>		9
Brownlie, J. W., <i>Vallejo</i>		31	Byron, R. L., <i>Los Angeles</i>		9	Chapman, J. F., <i>Pasadena</i>		9
Brownsberger, E. M., <i>Los Angeles</i>		9	Byron, W. P., <i>Lemoore</i>		4	Chapman, L. S., <i>Los Angeles</i>		9
Bruck, E. L., <i>San Francisco</i>		22	C			Chapman, L. E., <i>Gerber</i>		34
Bruckman, H., <i>San Jose</i>		27				Chapman, W. M., <i>Ontario</i>		20
Bruff, W. C., <i>Whittier</i>		9				Chapman, W. H., <i>Blythe</i>		17
Bruin, M. R., <i>Los Angeles</i>		9	Cady, D. W., <i>Pasadena</i>		9	Chappell, A. E., <i>Imola</i>		14
Bruman, A. K., <i>San Francisco</i>		22	Cady, F. P., <i>Los Angeles</i>		9	Chappell, H. W., <i>Los Angeles</i>		9
Brumbaugh, D. H., <i>Redlands</i>		20	Cahen, C. G., <i>Los Angeles</i>		9	Chappell, G. E., <i>Sacramento</i>		18

NAME	COUNTY	COUNTY SOCIETY NO.	NAME	COUNTY	COUNTY SOCIETY NO.	NAME	COUNTY	COUNTY SOCIETY NO.
Charlesworth, I. E., Imola.....		14	Cole, G. L., Los Angeles.....		9	Crane, C., Fernbridge.....		5
Charlton, A. T., Whittier.....		9	Cole, W., Long Beach.....		9	Crane, E. H., Inglewood.....		9
Charlton, C. F., Pasadena.....		9	Coleman, B. E., Los Angeles.....		9	Crane, H. W., Berkeley.....		1
Charnock, D. A., Los Angeles.....		9	Coleman, F. D., Los Angeles.....		9	Crane, J. J., Los Angeles.....		9
Chase, A. E., Santa Ana.....		15	Coller, G. J., Los Angeles.....		9	Crane, W. R., Los Angeles.....		9
Chase, F. H., Los Angeles.....		9	Collings, H. A., Susanville.....		8	Crane, W. W., Oakland.....		1
Chase, R. E., Glendale.....		9	Collins, A. W., San Francisco.....		22	Crane, H. R., Los Angeles.....		9
Chavez, M., Los Angeles.....		9	Collins, C. D., Fresno.....		4	Craven, L. L., Glendale.....		9
Cheney, G., San Francisco.....		22	Collins, F. K., Los Angeles.....		9	Craviotto, J. V., Stockton.....		23
Chency, L. D., Los Angeles.....		9	Collins, J. L., Turlock.....		33	Crawford, J. C., Orange.....		15
Cheney, M. C., Berkeley.....		1	Collins, M. C., Turlock.....		33	Crawford, W. W., San Diego.....		21
Cheney, W. F., San Francisco.....		22	Collisehonn, P., San Francisco.....		22	Crease, F. J., Bakersfield.....		9
Cherry, C. F., Los Angeles.....		9	Colver, B. N., Glendale.....		9	Crease, H. G., Bakersfield.....		7
Cherry, W. S., Rialto.....		20	Comfort, H. W., Fortuna.....		5	Cress, W. W., Sacramento.....		18
Chessman, F. N., Los Angeles.....		9	Commons, E. L., Los Angeles.....		9	Cresson, M., Santa Barbara.....		26
Chiapella, J. O., Chico.....		2	Compton, C. S., Bakersfield.....		7	Crew D. A., San Luis Obispo.....		24
Chidester, W. C., San Mateo.....		25	Comstock, B. W., Los Angeles.....		9	Criley, C. H., Los Angeles.....		9
Childers, L. A., San Jose.....		27	Comstock, D. D., Los Angeles.....		9	Crisp, N. J., Benicia.....		31
Childress, M. H., Ione.....		18	Condit, J. C., Oakland.....		1	Crispin, E. L., Los Angeles.....		9
Childrey, J. H., Santa Barbara.....		26	Condit, J. D., Pasadena.....		9	Crockett, C. A., San Francisco.....		22
Chilton, F. N., San Jose.....		27	Conerty, J. M., Los Angeles.....		9	Crooks, S. A., Loma Linda.....		20
Ching, P. S., Fresno.....		4	Congdon, W. R., Santa Cruz.....		28	Crosby, D., Oakland.....		1
Chipman, E. D., San Francisco.....		22	Conlan, F. J. S., San Francisco.....		22	Cross, W. W., Oakland.....		1
Chipman, W. D., Los Angeles.....		9	Conlan, P. T., Los Angeles.....		9	Crossan, J. W., Los Angeles.....		9
Choate, J. L., Los Angeles.....		9	Conlan, W. T., Hollywood.....		9	Crossen, A. S., Weimar.....		16
Chouret, E. E., Riverbank.....		33	Conn, C. E., Los Angeles.....		9	Crow, L. B., San Francisco.....		22
Christensen, A. C., Glendale.....		9	Connell, J. A., Riverside.....		17	Crowe, H. E., Los Angeles.....		9
Christensen, G. E., Los Angeles.....		9	Conner, A. W., San Jose.....		27	Crowl, V. C., Huntington Park.....		9
Christensen, W., Los Angeles.....		9	Connolly, T. W., San Francisco.....		22	Crowley, E., Santa Maria.....		26
Christian, J. T., Galt.....		18	Conover, G. D., Santa Monica.....		9	Crozier, H. C., Los Angeles.....		9
Christie, R. C., Long Beach.....		9	Conser, W. H., Guadalupe.....		26	Cruden, A. W., Santa Barbara.....		26
Christierson, S. von, San Francisco.....		22	Conzelmann, F. J., Stockton.....		23	Cruikshank, G. H., San Diego.....		21
Christman, P. W., Sacramento.....		18	Cooder, H. R., Los Angeles.....		9	Crum, H. C., Alameda.....		1
Christopherson, E. H., San Diego.....		21	Coodley, O., Los Angeles.....		9	Crummer, L., Los Angeles.....		9
Church, C. H., Berkeley.....		1	Cook, C. S., Los Angeles.....		9	Crusan, R. E., Monrovia.....		9
Church, I. O., Oakland.....		3	Cook, C. W., Los Angeles.....		9	Crutehett, W. L., Marysville.....		39
Church, M. V., Norwalk.....		9	Cook, E. J., Los Angeles.....		9	Cryst, J. H., Los Angeles.....		9
Churchill, J. F., San Diego.....		21	Cook, E. F., Los Angeles.....		9	Cummings, J. C., Glendale.....		9
Cilley, H. A., San Jose.....		27	Cook, E. P., San Jose.....		27	Cummings, R. S., Los Angeles.....		9
Citron, J. W., Oakland.....		1	Cook, J. D., Olive View.....		9	Cummings, R. A., Los Angeles.....		9
Clark, C. W., San Rafael.....		10	Cook, K. D., Maricopa.....		7	Cummins, F. A., Los Angeles.....		9
Clark, D. M., Santa Barbara.....		26	Cook, O. S., Sacramento.....		18	Cuneo, J. C., San Jose.....		27
Clark, D. G., Santa Paula.....		37	Cook, W. C., Los Angeles.....		9	Cuneo, P. J., Bakersfield.....		7
Clark, E. P., Los Angeles.....		9	Cook, W. P., Los Angeles.....		9	Cunha, F., San Francisco.....		22
Clark, E. B., Stanford University.....		27	Cooke, A. B., Los Angeles.....		9	Cunnane, P. J., Los Angeles.....		9
Clark, G. S., Los Angeles.....		9	Cooke, H. T., Los Angeles.....		9	Cunnane, T. B., Los Angeles.....		9
Clark, I. S., Long Beach.....		9	Cooke, W. C., San Diego.....		21	Cunningham, R. L., Los Angeles.....		9
Clark, J. W., Santa Rosa.....		32	Cooley, C. L., San Francisco.....		22	Cunningham, R. L., Berkeley.....		1
Clark, J. A., Gilroy.....		27	Coon, G. W., Riverside.....		17	Cunningham, T. M., La Mesa.....		21
Clark, J. I., Santa Ana.....		15	Cooper, A. J., San Diego.....		21	Cunningham, W. E., Richmond.....		3
Clark, J., Gilroy.....		27	Cooper, B., Arcata.....		5	Curdts, C. E., Oakland.....		1
Clark, L. J., Hemet.....		17	Cooper, C. M., San Francisco.....		22	Currey, H. M., Santa Ana.....		15
Clark, M. E., Los Angeles.....		9	Cooper, F. G., Huntington Park.....		9	Currie, A. H., Los Angeles.....		9
Clark, M. F., San Francisco.....		1	Cooper, G. P., Angeles Camp.....		23	Curtis, C. G., Brea.....		15
Clark, T. J., Oakland.....		1	Cooper, J. A., Modesto.....		33	Curtis, L. E., San Francisco.....		22
Clark, V. G., San Diego.....		21	Cooper, T. E., Davis.....		38	Cushman, G. F., San Francisco.....		22
Clark, W. F., Los Angeles.....		9	Cooper, W., Palo Alto.....		27	Cushman, R. A., Talmage.....		11
Clark, W. S., Ventura.....		37	Copeland, J. A., Long Beach.....		7	Custer, L. R., San Francisco.....		22
Clark, W. A., Pasadena.....		9	Copp, E. F. F., La Jolla.....		21	Cutler, O. I., Loma Linda.....		20
Clark, W. R. P., San Francisco.....		22	Corbin, D. E., San Diego.....		21	Cutter, R. K., Berkeley.....		1
Clarke, A. F., Oakland.....		1	Cordes, F. C., San Francisco.....		22	Cutting, G. R., Delano.....		7
Clarke, F. B., Long Beach.....		9	Cordua, O. B., San Diego.....		21	Cutting, J. A., Agnew.....		27
Clarke, G. W., San Bernardino.....		20	Cornell, C. E., Los Angeles.....		9			
Clarke, L. H., Riverside.....		17	Cornell, H. D., San Diego.....		21	D		
Clarke, R. M., Los Angeles.....		9	Cornelle, J. G., Berkeley.....		1	Dabney, T. G., San Francisco.....		1
Clarke, W. T., Los Angeles.....		9	Cornett, W. F., Pasadena.....		9	Daggett, E. H., Oakland.....		1
Clattenburg, H. A., Redwood City.....		25	Cornwall, T. W., San Francisco.....		22	Dahleen, H. E., San Jose.....		27
Clay, H. E., San Francisco.....		22	Corr, W. P., Los Angeles.....		9	Dahlgren, R. W., Fresno.....		4
Clayes, W. I., San Francisco.....		22	Cortright, C. B., Berkeley.....		1	Dailey, W. J., Oakland.....		1
Clayton, J. H., Los Angeles.....		9	Cosgrove, C. P., Los Angeles.....		9	Daily, K., Richmond.....		3
Cleary, E. W., San Francisco.....		22	Cosgrove, J. B., Los Angeles.....		9	Dakin, W. B., Los Angeles.....		9
Cleary, G. G., San Francisco.....		9	Costar, W. J., Jr., Chico.....		2	Dale, C. L., Loma Linda.....		20
Cleeves, M., La Crescenta.....		22	Costolow, W. E., Los Angeles.....		9	d'Alessio, J. A., Santa Barbara.....		26
Cleland, H. O., Ukiah.....		11	Cottle, C. C., Los Angeles.....		9	Dallal, J. M., San Mateo.....		25
Clemons, E. J., Los Angeles.....		9	Cottrell, C. C., Scotia.....		5	Dallas, D. A., San Francisco.....		22
Cleveland, L. S., San Jose.....		27	Cottrell, E. L., San Jose.....		27	Daly, L. E., Needles.....		20
Cline, J. W., San Francisco.....		22	Cottrell, J. C., Long Beach.....		9	Damerson, J. D., Stockton.....		23
Close, K. M., Los Angeles.....		9	Couey, E. J., Fresno.....		4	Daniel, W. H., Los Angeles.....		9
Clough F. E., San Bernardino.....		20	Coulter, H. M., South Pasadena.....		9	Dannenbaum, S. R., San Francisco.....		22
Clymer, H. V., Fairfield.....		31	Counter, C. E., Buena Park.....		15	Darling, H. H., San Francisco.....		22
Coates, G. L., Jr., Martinez.....		3	Covington, L. C., La Mesa.....		21	Dart, A. E., Oakland.....		1
Coblentz, L. B., San Francisco.....		22	Cowan, A. B., Fresno.....		4	Dashiell, W. A., Los Angeles.....		9
Coblentz, Z. B., Santa Maria.....		26	Cowgill, C. H., Huntington Park.....		9	Dasse, H. W., Los Angeles.....		9
Cochran, G. V., Oakland.....		1	Cowin C. C., Hollywood.....		9	Dassett, J. W., Los Angeles.....		9
Cochran, G. H., Los Angeles.....		9	Cowles, D. C., Fullerton.....		15	Dau, N. J., Fresno.....		4
Cochran, R. C., Yorba Linda.....		15	Cox, B. E., Fresno.....		4	Daughters, H. G., Los Angeles.....		9
Coe, H. C., Oakland.....		1	Cox, G. W., San Francisco.....		22	Davenport, J. D., Los Angeles.....		9
Coeur-Barron, F. H., Los Angeles.....		9	Cox, J. E., Coalinga.....		4	David, N. A., Morgantown, W. Va.....		22
Coffey, G. C., Ventura.....		37	Cox, T. J., San Francisco.....		22	David, R. A., Los Angeles.....		9
Coffey, E. C., Orland.....		38	Cox, W. J., San Francisco.....		22	Davidson, B. R., Brawley.....		6
Coffey, H. E., San Francisco.....		22	Coyle, J. D., Sacramento.....		18	Davidson, W. T., Carmel.....		13
Coffey, S. E., Orland.....		38	Coyne, A. E., Los Angeles.....		9	Davies, B. C., Los Angeles.....		9
Coffey, T. J., Los Angeles.....		9	Crabtree, E. H., San Diego.....		21	Davis, A. D., San Francisco.....		22
Coffey, W. B., San Francisco.....		22	Crabtree, E. G., San Diego.....		21	Davis, A. S., Oakland.....		1
Coffin, C. C., Oakland.....		1	Crabtree, W. C., San Diego.....		21	Davis, C. L., San Diego.....		21
Coffin, H. W., Los Angeles.....		9	Craft, E. D., Los Angeles.....		9	Davis, E. A., San Francisco.....		22
Coghlan, C. C., Los Angeles.....		9	Crafts, J. G., Brentwood.....		3	Davis, E. J., San Diego.....		21
Cohn, A. L., San Francisco.....		22	Crahan, M. E., Los Angeles.....		9	Davis, F. J., Westwood.....		8
Cohn, H. J., San Francisco.....		22	Craig, J. B., Upland.....		20	Davis, H. H., El Segundo.....		9
Cohn, J., Los Angeles.....		9	Craig, L. G., Pasadena.....		9	Davis, H. W., San Francisco.....		22
Cohn, M. L., San Francisco.....		22	Craig, R. G., San Francisco.....		22	Davis, H. C., San Francisco.....		22
Cohn, S., San Francisco.....		22	Craig, S. A., Ontario.....		20	Davis, H. J., Sacramento.....		18
Colburn, J. M., Riverside.....		17	Craik, C. W., Venice.....		9	Davis, J. D., Los Angeles.....		9
Colby, E. G., San Diego.....		21	Crane, C. C., San Francisco.....		22			

NAME	COUNTY	SOCIETY NO.	NAME	COUNTY	SOCIETY NO.	NAME	COUNTY	SOCIETY NO.
Davis, K. S., <i>Los Angeles</i>		9	Dowd, R. E., <i>San Bernardino</i>		20	Eiskamp, E. H., <i>Watsonville</i>		28
Davison, C. L., <i>Los Angeles</i>		9	Dowling, S. W., <i>Santa Cruz</i>		28	Eklund, O. E., <i>San Francisco</i>		22
Davison, J. T., <i>Stockton</i>		23	Downing, S. R., <i>Oakland</i>		1	Eldredge, W. W., <i>Fontana</i>		20
Davison, S. T., <i>San Francisco</i>		22	Downs, A. J., <i>Los Angeles</i>		9	Elkins, D. L., <i>Long Beach</i>		9
Davitt, G. G., <i>Los Angeles</i>		9	Downs, L., <i>Hollywood</i>		9	Elliot, A. H., Jr., <i>Santa Barbara</i>		26
Davlin, L. P., <i>Gonzales</i>		13	Doyle, G. P., <i>Berkeley</i>		1	Elliott, A. E., <i>San Diego</i>		21
Dawson, G. I., <i>Napa</i>		14	Doyle, J. C., <i>Los Angeles</i>		9	Elliott, A. L., <i>Berkeley</i>		1
Day, E. C., <i>Laguna Beach</i>		15	Doyle, J. B., <i>Los Angeles</i>		9	Elliott, F. P., <i>San Diego</i>		21
Day, P. W., <i>Repressa</i>		18	Doyle, J. J. L., <i>Chico</i>		2	Elliott, H. M., <i>Los Angeles</i>		9
Day, R. V., <i>Los Angeles</i>		9	Dozier, D. F., <i>Sacramento</i>		18	Ellis, H. O., <i>Chico</i>		2
Dayton, G. O., <i>Los Angeles</i>		9	Dozier, E., <i>Redding</i>		29	Ellis, J. A., <i>Alameda</i>		1
Dazey, G. K., <i>Venice</i>		9	Dozier, L., <i>Stockton</i>		23	Ellis, L. T., <i>Los Angeles</i>		9
Deacon, G., <i>Pasadena</i>		9	Drace, C. G., <i>Ojai</i>		37	Ellis, M., <i>Los Angeles</i>		9
Dean, J. R., <i>Los Angeles</i>		9	Dragos, S. V., <i>Avenal</i>		4	Ellis, W. L., <i>Boulder Creek</i>		28
Deane, L. C., <i>San Francisco</i>		22	Drake, D. D., <i>San Francisco</i>		22	Ellsworth, A. B., <i>Long Beach</i>		9
Dearing, B. F., <i>San Francisco</i>		22	Drake, J. C., <i>Kerman</i>		4	Ellwood, P. M., <i>Oakland</i>		1
Debenham, M. W., <i>San Francisco</i>		22	Draper, D. B., <i>San Jose</i>		27	Eloesser, L., <i>San Francisco</i>		2
Dearborn, R. R., <i>Madera</i>		3	Dray, F. R., <i>San Francisco</i>		22	Elvin, A. G., <i>Vancouver, B. C.</i>		7
Decker, C. W., <i>Los Angeles</i>		9	Drees, L. A., <i>San Francisco</i>		22	Ely, L. W., <i>San Francisco</i>		27
Deering, W. E., <i>Hollywood</i>		9	Drennan, P. G., <i>Oakland</i>		1	Emerson, M. L., <i>Oakland</i>		1
Delamere, G. S., <i>Marysville</i>		39	Dresel, R. L., <i>San Francisco</i>		22	Emery, C. E., <i>San Francisco</i>		22
DeLancey, C. A., <i>San Rafael</i>		10	Drw, J. F., <i>Walnut Grove</i>		18	Emery, C. K., <i>Los Angeles</i>		9
DeLappe, F. R., <i>Modesto</i>		33	Driver, C. O., <i>Los Angeles</i>		9	Emery, W. S., <i>Los Angeles</i>		9
Delprat, G. D., Jr., <i>San Francisco</i>		22	Drucks, E. S., <i>Oakland</i>		1	Emge, L. A., <i>San Francisco</i>		22
Delprat, J. L. P., <i>San Francisco</i>		22	Dryden, F. M., <i>Pasadena</i>		9	Emmons, C. L., <i>Ontario</i>		20
DeLucis, A., <i>San Francisco</i>		22	Dryer, D. S., <i>Los Angeles</i>		9	Empey, L. W., <i>Roseville</i>		16
Dempsey, R. B., <i>Vallejo</i>		31	Drysdale, G. N., <i>Sacramento</i>		18	Emrick, E. L., <i>Stockton</i>		23
Denman, C. H., <i>Berkeley</i>		1	DuBois, C. W., <i>Los Angeles</i>		9	Ende, F. M., <i>Hollywood</i>		9
Dennis, H. O., <i>Beverly Hills</i>		9	Dubois, W. C., <i>Santa Ana</i>		15	Endres, W. J., <i>Los Angeles</i>		9
Denton, W. L., <i>Trona</i>		20	DuBray, E. S., <i>San Francisco</i>		22	Engle, H. M., <i>San Francisco</i>		22
DePuy, C. A., <i>Oakland</i>		1	Dudley, H. W., <i>San Rafael</i>		10	English, C. F., <i>Stockton</i>		23
Derrick, J. S., <i>Los Angeles</i>		9	Duffey, G. W., <i>Sacramento</i>		18	English, G. G., <i>Hollywood</i>		9
Desimone, L. O., <i>Los Angeles</i>		9	Duffield, W., <i>Los Angeles</i>		9	Enloe, N. T., <i>Chico</i>		2
Desparois, G. B., <i>Los Angeles</i>		9	Duggan, H., <i>San Francisco</i>		22	Enos, J. B., <i>Oakland</i>		1
Desrosier, G. W., <i>Colusa</i>		38	Dukes, C. A., <i>Oakland</i>		1	Enos, M. M., <i>Oakland</i>		1
Desser, A. L., <i>Los Angeles</i>		9	Dunbar, W. V., <i>San Pedro</i>		9	Epsteen, A., <i>San Francisco</i>		22
Detling, F. E., <i>Los Angeles</i>		9	Duncan, J. A., <i>Marysville</i>		39	Epstein, N. N., <i>San Francisco</i>		22
Detrick, H. H., <i>Beverly Hills</i>		9	Duncan, M. V., <i>Lompoc</i>		26	Erickson, H. A., <i>Manila, P. I.</i>		9
Dewey, E. B., <i>Pasadena</i>		9	Duncan, R. D., <i>Los Angeles</i>		9	Erkenbeck, J. W., <i>San Diego</i>		21
Dewey, H. G., <i>Yosemite</i>		12	Duncan, W. C., <i>Los Angeles</i>		9	Erkenbeck, V. J., <i>San Diego</i>		21
Dewey, R. S., <i>LaCanada</i>		9	Dundas, R. C., <i>Los Angeles</i>		9	Erlanger, V. J., <i>San Diego</i>		21
Dick, P. J., <i>Oakland</i>		1	Dunievitz, M., <i>Auburn</i>		16	Ernsberger, G. H., <i>Los Angeles</i>		9
Dickerson, W. L., <i>Long Beach</i>		9	Dunklec, G. K., <i>San Luis Obispo</i>		24	Ervin, D. M., <i>San Francisco</i>		22
Dickey, C. D., Jr., <i>Los Angeles</i>		9	Dunlap, A. K., <i>Sacramento</i>		18	Eshman, L. A., <i>Los Angeles</i>		9
Dickey, C. A., <i>San Francisco</i>		22	Dunlop, J., <i>Pasadena</i>		9	Esnard, R. P., <i>Los Angeles</i>		9
Dickie, W. M., <i>Berkeley</i>		1	Dunn, R. H., <i>San Francisco</i>		22	Esslinger, P. H., <i>San Juan Capis- trano</i>		15
Dickinson, A. E., <i>Los Gatos</i>		27	Dunn, R. D., <i>San Francisco</i>		22	Etter, O. R., <i>Oakland</i>		1
Dickinson, C. C., <i>McCloud</i>		30	Dunne, N. P., <i>Oakland</i>		1	Eusden, R. B., <i>Long Beach</i>		9
Dickson, A. R., <i>Los Angeles</i>		9	Dunphy, J. M., <i>Santa Cruz</i>		28	Evans, G. H., <i>San Francisco</i>		22
Dickson, E. C., <i>San Francisco</i>		22	Dunsmoor, N. C., <i>Los Angeles</i>		9	Evans, H. R., <i>Los Angeles</i>		20
Dickson, G. G., <i>Los Angeles</i>		9	Dunsmoor, R. M., <i>Los Angeles</i>		9	Evans, J. H., <i>Highland</i>		20
Didier, F. W., <i>Wheatland</i>		39	Dupuich, L. R., <i>Oakland</i>		1	Evans, J. G., <i>Los Angeles</i>		9
Diederich, O. P., <i>Fresno</i>		4	Durbin, M. M., <i>Pasadena</i>		1	Evans, L. M., <i>Pasadena</i>		9
Diefenbach, W. E., <i>La Jolla</i>		21	Durgin, R. M., <i>Berkeley</i>		1	Evans, N. G., <i>S. Pasadena</i>		9
Diepenbrock, A. B., <i>San Francisco</i>		22	Durr, S. A., <i>San Diego</i>		21	Evans, R. D., <i>Santa Barbara</i>		26
Diederich, C. E., <i>San Francisco</i>		22	Dutcher, W., <i>Los Angeles</i>		9	Eveleth, R. H., <i>Roseville</i>		16
Dietz, K. L., <i>Los Angeles</i>		9	Dutton, M. L., <i>San Francisco</i>		22	Everingham, S., <i>Oakland</i>		1
Dietrich, H., <i>Los Angeles</i>		9	Duvall, E. M., <i>Long Beach</i>		9	Every, H. N., <i>Novato</i>		10
Dietz, H. L., <i>Oakland</i>		1	Dye, W. G., <i>Los Angeles</i>		9	Ewens, F., <i>Long Beach</i>		9
Diggs, C. S., <i>Los Angeles</i>		9	Dyke, L. H., <i>Oakland</i>		1	Ewer, E. N., <i>Oakland</i>		1
Dignan, H. H., <i>San Francisco</i>		22	Dykes, H. R., <i>Taft</i>		7	Ewer, J. N., <i>Oakland</i>		1
Dillingham, F. S., <i>Los Angeles</i>		9	Dymont, B. S., <i>Stanford University</i>		27	Ewing, F., <i>Oakland</i>		1
Dillon, E. T., <i>Los Angeles</i>		9	Dysart, B. R., <i>Pasadena</i>		9	Exelby, P. B., <i>Los Angeles</i>		9
Dillon, G. P., <i>Sacramento</i>		18	E			Eymundson, K. S., <i>San Francisco</i>		22
Dillon, J. R., <i>San Francisco</i>		22	Eager, B. E., <i>San Diego</i>		21	Eytinge, E. J., <i>Redlands</i>		20
Dillon, V. M., <i>San Francisco</i>		22	Eakin, M. A., <i>San Francisco</i>		22	F		
Dilworth, W. D., <i>Pasadena</i>		9	Earl, H., D., <i>San Pedro</i>		9	Faber, H. K., <i>San Francisco</i>		22
Dingeman, F. J., <i>San Diego</i>		21	Earle, L. M., <i>Los Angeles</i>		9	Facey, F. D., <i>San Fernando</i>		9
Divanovich, D., <i>San Francisco</i>		22	Early, C. E., <i>Los Angeles</i>		9	Fagan, R. H., <i>Los Angeles</i>		9
Dixon, H. L., <i>Southgate</i>		9	Eastman, W. R., <i>La Jolla</i>		21	Fagan, S. F., <i>Los Angeles</i>		9
Dixon, H. B., <i>San Francisco</i>		22	Easton, D. E. F., <i>San Francisco</i>		22	Fagerstrom, D. P., <i>San Jose</i>		27
Doane, F. L., <i>Red Bluff</i>		34	Eaton, G. L., <i>San Francisco</i>		22	Fainstein, H. J., <i>Los Angeles</i>		9
Doane, P. S., <i>Pasadena</i>		9	Eaton, H. D., <i>Los Angeles</i>		9	Fairchild, C. H., <i>Woodland</i>		38
Dock, G., <i>Pasadena</i>		9	Eaton, J. L., <i>Berkeley</i>		1	Fairchild, F. R., <i>Woodland</i>		38
Dock, W., <i>San Francisco</i>		22	Eaton, W. H., <i>Santa Barbara</i>		26	Fairchild, L. H., <i>Carlsbad</i>		21
Dodge, G. E., <i>Los Angeles</i>		9	Eaves, J., <i>Oakland</i>		1	Falconer, E. H., <i>San Francisco</i>		22
Dodge, W., <i>Los Angeles</i>		9	Eberson, F., <i>San Francisco</i>		22	Falconer, F. H., <i>Los Angeles</i>		9
Dolan, P. E., <i>Livermore</i>		1	Ebright, G. E., <i>San Francisco</i>		22	Falk, C. C., <i>Eureka</i>		5
Dole, K. L., <i>Redlands</i>		20	Eckerle, W. J., <i>Wilmington</i>		9	Falk, C. L., <i>Eureka</i>		5
Dolley, F. S., <i>Los Angeles</i>		9	Eckhardt, W. W., <i>Los Angeles</i>		9	Falk, E. V., <i>Modesto</i>		33
Dolman, P., <i>San Francisco</i>		22	Eddy, I. H., <i>Glendale</i>		9	Fallas, R. E., <i>Los Angeles</i>		9
Domann, A. H., <i>Orange</i>		15	Edelman, D. W., <i>Los Angeles</i>		9	Fanning, J. L., <i>Sacramento</i>		18
Donald, W. G., <i>Berkeley</i>		1	Eder, H. L., <i>Santa Barbara</i>		26	Fanson, E., <i>Pasadena</i>		9
Donclan, J. P., <i>Los Angeles</i>		9	Eder, L. F., <i>Santa Barbara</i>		26	Faris, H. S., <i>Riverside</i>		17
Donnell, R. H., <i>San Diego</i>		21	Edgar, M. S., <i>San Rafael</i>		10	Farman, G. F., <i>Los Angeles</i>		9
Donohoe, E. C., <i>Glendale</i>		9	Edgerton, A. E., <i>San Francisco</i>		22	Farmer, J. C., <i>Felton</i>		28
Donovan, M., <i>San Francisco</i>		22	Edler, W., <i>Pasadena</i>		9	Farmer, L. E., <i>Folsom City</i>		18
Doran, A. V., <i>Vallejo</i>		31	Edmonds, F. W., <i>Oakland</i>		1	Farnham, R. M., <i>Glendale</i>		9
Doria, M. M., Jr., <i>San Diego</i>		21	Edmondson, J. D., <i>Orland</i>		38	Farnsworth, H. B., <i>Berkeley</i>		1
Dormody, H. L., <i>Monterey</i>		13	Edson, P. J., <i>Pasadena</i>		9	Farnsworth, T. K., <i>Los Angeles</i>		9
Dormody, H. F., <i>Monterey</i>		13	Edward, J. T., <i>Pasadena</i>		9	Farr, W. H., <i>Salinas</i>		13
Dorn, J. H., <i>San Francisco</i>		22	Edwards, F. A., <i>Los Angeles</i>		9	Farrage, J., <i>Santa Ana</i>		15
Dorr, W. R., <i>Arlington</i>		17	Edwards, H. W., <i>Los Angeles</i>		9	Farrell, J. W., <i>Los Angeles</i>		9
Dostal, R. J., <i>Santa Monica</i>		9	Edwards, J. C., <i>Berkeley</i>		1	Farrell, L. W., <i>Sacramento</i>		18
Dotson, E. E., Jr., <i>Escondido</i>		21	Edwards, W. M., <i>Portola</i>		8	Farrow, E. J., <i>San Diego</i>		21
Dougall, J. P., <i>Los Angeles</i>		9	Ehlers, E. C., <i>Loma Linda</i>		20	Fate, M. W., <i>Los Angeles</i>		9
Dougan, S., <i>San Jose</i>		27	Ehlers, H., <i>Fowler</i>		4	Fate, W. A., <i>Los Angeles</i>		9
Dougherty, E. E., <i>Los Angeles</i>		9	Ehrenclo, O. N., <i>San Francisco</i>		22	Faulkner, E. C., <i>Sacramento</i>		18
Dougherty, J. A., <i>Oakland</i>		1	Ehrke, A. A., <i>Compton</i>		9	Faulkner, J. L., <i>Red Bluff</i>		34
Dougherty, P. S., <i>Los Angeles</i>		9	Eidenmuller, W. C., Jr., <i>San Fran- cisco</i>		22	Faulkner, W. B., Jr., <i>San Francisco</i>		22
Doughty, J. F., <i>Tracy</i>		23	Eisen, E. G., <i>Los Angeles</i>		9	Fay, F. G., <i>Sacramento</i>		18
Douglass, P., <i>Keene</i>		7						
Doupe, R. G., <i>Tehachapi</i>		7						
Dow, J. N., <i>Los Angeles</i>		9						

NAME	COUNTY	COUNTY SOCIETY NO.	NAME	COUNTY	COUNTY SOCIETY NO.	NAME	COUNTY	COUNTY SOCIETY NO.
Fay, G. H., <i>Auburn</i>		16	Francis, R. K., <i>Inglewood</i>		9	Gehrels, F., <i>San Mateo</i>		25
Fay, J., <i>San Francisco</i>		22	Francis, V. C., <i>Long Beach</i>		9	Geiger, J. C., <i>San Francisco</i>		22
Fearn, J. R., <i>Oakland</i>		1	Francis, W. V. C., <i>Los Angeles</i>		9	Geisler, W. H., <i>San Jose</i>		27
Fearon, W. M., <i>Los Angeles</i>		9	Frandy, M. F., <i>Oakland</i>		1	Geistweit, W. H., Jr., <i>San Diego</i>		21
Feeley, M. A., <i>San Francisco</i>		22	Frankenhelmer, J. B., <i>San Francisco</i>		22	Geith, C. R., <i>Riverside</i>		17
Felliman, W. E., <i>Santa Cruz</i>		28	Frankl, J., <i>Los Angeles</i>		9	Gelston, C. P., <i>San Francisco</i>		22
Fehrenschen, G., <i>Inglewood</i>		9	Franklin, D. M., <i>Los Angeles</i>		9	Genochio, E. P., <i>San Francisco</i>		22
Feinberg, H., <i>San Francisco</i>		22	Franklin, J. H., <i>Guadalupe</i>		26	Gentry, H. G., <i>Redlands</i>		20
Felberbaum, W., <i>Santa Paula</i>		37	Franklin, W. S., <i>Santa Barbara</i>		26	George, A. R., <i>Loma Linda</i>		20
Feldman, C., <i>Maywood</i>		9	Franklin, W. R., <i>Los Angeles</i>		9	George, J. D., <i>Los Angeles</i>		9
Felger, L., <i>Los Angeles</i>		9	Frary, B. S., <i>Los Angeles</i>		9	George, J. M., <i>San Francisco</i>		22
Fellows, A., <i>Los Angeles</i>		9	Frash, O. R., <i>San Francisco</i>		22	George, L. H., <i>Loma Linda</i>		20
Felsenthal, L., <i>Los Angeles</i>		9	Fraser, H. E., <i>San Francisco</i>		22	George, W. A., <i>Loma Linda</i>		20
Fenton, W. W., <i>San Bernardino</i>		20	Fraser, L. H., <i>Richmond</i>		3	Gerisch, H. H., <i>Los Angeles</i>		9
Ferguson, C. J., <i>Los Angeles</i>		9	Fraser, M. L., <i>Los Angeles</i>		9	Gerlach, F. C., <i>San Jose</i>		27
Fernandez, M. L., <i>Pinole</i>		3	Fraser, M. W., <i>Woodlake</i>		35	Gerlough, R. J., <i>Menlo Park</i>		25
Fernish, C. A., <i>Santa Clara</i>		27	Frawley, J. M., <i>Fresno</i>		4	Germann, A. C., <i>Los Angeles</i>		9
Ferrante, A. A., <i>San Francisco</i>		22	Frederickson, H., <i>Eldridge</i>		32	Gernand, H. C., <i>Los Angeles</i>		9
Ferrier, P. A., <i>Pasadena</i>		9	Freese, B. M., <i>Los Angeles</i>		9	Gerrard, C. C., <i>Redding</i>		29
Ferry, F. C., <i>Los Angeles</i>		15	Fregeau, A. N., <i>San Francisco</i>		22	Gerstle, M., Jr., <i>San Francisco</i>		22
Fetter, E. M., <i>San Diego</i>		21	Freidell, H. F., <i>Santa Barbara</i>		26	Gewertz, L. L., <i>Los Angeles</i>		9
Fibush, A., <i>San Francisco</i>		22	French, C. E., <i>San Francisco</i>		22	Geyman, M. J., <i>Santa Barbara</i>		26
Fiegel, F. X., <i>San Bernardino</i>		20	French, J. R., <i>Los Angeles</i>		9	Ghrist, D. G., <i>Los Angeles</i>		9
Field, A. M., <i>Patterson</i>		33	Frcudenthal, L., <i>Gridley</i>		2	Ghrist, D. M., <i>Glendale</i>		9
Field, J. W., <i>Alhambra</i>		9	Frey, R. G., <i>Red Bluff</i>		34	Ghrist, O. E., <i>Glendale</i>		9
Fielder, R. L., <i>San Francisco</i>		22	Frey, W. C., <i>San Francisco</i>		22	Giannini, A. H., <i>Los Angeles</i>		22
Fielding, G. A., <i>Brentwood Heights</i>		9	Freyermuth, O. G., <i>San Francisco</i>		22	Gibbons, H., III, <i>San Francisco</i>		22
Fields, D. B., <i>San Francisco</i>		29	Frick, D. J., <i>Los Angeles</i>		9	Gibbons, H. W., <i>Sacramento</i>		18
Fields, M., <i>Los Angeles</i>		9	Fricke, A. A., <i>Los Angeles</i>		9	Gibbons, M. R., <i>San Francisco</i>		22
Fisceler, W. R., <i>Los Angeles</i>		9	Friedberger, W., <i>Stockton</i>		23	Gibbons, M. R., Jr., <i>San Francisco</i>		22
Fish, E. A., <i>San Jose</i>		27	Friedman, A., <i>San Francisco</i>		25	Gibbs, D. H., <i>Los Angeles</i>		9
Finan, A. P., <i>Suisun</i>		31	Friedman, J. C., <i>Banning</i>		17	Gibbs, R. S., <i>San Bernardino</i>		20
Finch, W. C., <i>Los Angeles</i>		9	Friedman, M., <i>Los Angeles</i>		9	Gibbs, W. M., <i>Glendale</i>		9
Fine, I. A., <i>Los Angeles</i>		9	Friesen, H. J., <i>Glendale</i>		9	Gibson, A. C., <i>San Francisco</i>		22
Finkelberg, I. L., <i>San Bernardino</i>		20	Frisch, A., <i>Los Angeles</i>		9	Gibson, T. E., <i>San Francisco</i>		22
Flinnerty, E. J., <i>Sonoma</i>		32	Fritschen, W., <i>San Francisco</i>		22	Gidley, D. S., <i>Ontario</i>		20
Finsand, V., <i>San Francisco</i>		22	Frizzell, R. R., <i>Pasadena</i>		9	Gidoll, S. H., <i>San Francisco</i>		22
Firestone, F., <i>San Francisco</i>		22	Froehlich, D. E., <i>Oakland</i>		1	Gifford, M. A., <i>San Francisco</i>		22
Fischel, K., <i>Los Angeles</i>		9	Frohman, B. S., <i>San Francisco</i>		22	Gilbert, B. H., <i>Porterville</i>		35
Fish, E. S., <i>Los Angeles</i>		9	Frost, E., <i>Stockton</i>		23	Gilbert, J. S., <i>Los Angeles</i>		9
Fishbaugh, E. C., <i>Los Angeles</i>		9	Frost, K. P., <i>Los Angeles</i>		9	Gilbert, Q. O., <i>Oakland</i>		1
Fisher, A. L., <i>San Francisco</i>		22	Frug, J., <i>Oakland</i>		1	Gilbert, R., <i>San Francisco</i>		22
Fisher, C., <i>Los Angeles</i>		9	Fry, P. B., <i>Benicia</i>		31	Gilbert, W. H., <i>Los Angeles</i>		9
Fisher, C. A., <i>Los Angeles</i>		9	Fuller, R. N., <i>Tulare</i>		35	Gilcreest, E. L., <i>San Francisco</i>		22
Fisher, R. H., <i>Oakland</i>		1	Furbush, C. G., <i>Oakland</i>		1	Giles, F. E., <i>Los Angeles</i>		9
Fisher, R. E., <i>Pomona</i>		9	Furlong, R. M., <i>San Francisco</i>		22	Gillfillan, H. M., <i>San Francisco</i>		22
Fisher, V. L., <i>Long Beach</i>		9	Furness, G. B., <i>Visalia</i>		35	Gilkey, W. D., <i>Long Beach</i>		9
Fisher, W. L., <i>Pomona</i>		9	Furstman, J. M., <i>Monrovia</i>		9	Gillespie, S. T., <i>La Jolla</i>		21
Fist, H. S., <i>Los Angeles</i>		9	Futch, C. E., <i>Los Angeles</i>		9	Gilliatt, W. H., <i>Coalinga</i>		4
Fitzgerald, J. J., <i>Richmond</i>		34	G			Gillihan, A. F., <i>San Luis Obispo</i>		24
Fitzgerald, W. W., <i>Stockton</i>		23	Gage, A. E., <i>Los Angeles</i>		9	Gilliland, M. L., <i>Los Angeles</i>		9
Fitzgibbon, C. C., <i>Merced Falls</i>		12	Gage, A. T., <i>Redlands</i>		20	Gilliland, R. C., <i>Callao, Peru</i>		9
Fitzpatrick, E. B., <i>Martinez</i>		3	Gage, C. E., <i>Los Angeles</i>		9	Gillis, J. P., <i>Los Angeles</i>		9
Flagg, D. P., <i>Los Angeles</i>		9	Gageby, L. H., <i>Los Angeles</i>		9	Gillis, J. D., <i>Los Angeles</i>		9
Flamson, R. J., <i>Los Angeles</i>		9	Gagnon, A. L., <i>San Diego</i>		21	Gilman, P. K., <i>San Francisco</i>		22
Flatley, M., <i>Weimar</i>		16	Gallmard, C. R., <i>Los Angeles</i>		9	Ginsburg, H. M., <i>Fresno</i>		4
Fleissner, C. M., <i>Santa Rosa</i>		32	Galbraith, A., <i>Oakland</i>		1	Ginsburg, S. S., <i>Visalia</i>		35
Fleming, E. W., <i>Los Angeles</i>		9	Galbraith, F. B., <i>Alameda</i>		1	Giovinco, J. B., <i>San Francisco</i>		22
Fleming, H. W., <i>San Francisco</i>		22	Galbraith, G. H., <i>Long Beach</i>		9	Girard, F. R., <i>San Francisco</i>		22
Fleming, L. P., <i>Sanger</i>		4	Gale, W. V., <i>Los Angeles</i>		9	Girdleston, C. W., <i>Riverside</i>		17
Fleming, S., <i>Eureka</i>		5	Gallant, A. E., <i>Los Angeles</i>		9	Glascok, F. L., <i>Los Angeles</i>		9
Fletcher, C. D., <i>San Francisco</i>		22	Gallant, P. A., <i>Huntington Park</i>		9	Glaser, E. F., <i>San Francisco</i>		22
Fletcher, H. A., <i>San Francisco</i>		22	Gallagos, P. B., <i>Stockton</i>		23	Glaser, M. A., <i>Los Angeles</i>		9
Fletcher, R., <i>San Francisco</i>		22	Galligan, C. A., Jr., <i>Monterey</i>		13	Glass, K. W., <i>Alhambra</i>		9
Flewelling, L. M., <i>Glendale</i>		9	Galloway, C. E., <i>Hollywood</i>		9	Glass, S. J., <i>Los Angeles</i>		9
Flitteroft, L. M. I., <i>Sacramento</i>		18	Gallup, H. A., <i>San Luis Obispo</i>		24	Glassman, S. C., <i>Los Angeles</i>		9
Floersheim, S., <i>Los Angeles</i>		9	Gallwey, J., <i>San Francisco</i>		22	Gleason, A. L., <i>Oakland</i>		1
Flood, R. G., <i>San Francisco</i>		22	Gamette, D. L., <i>Los Angeles</i>		9	Gleeten, S. D., <i>Monrovia</i>		9
Floreth, O. P., <i>Dixon</i>		31	Gans, C. H., <i>Long Beach</i>		9	Glenn, R. A., <i>Oakland</i>		1
Fluhmann, C. F., <i>San Francisco</i>		22	Garcelon, H., <i>San Bernardino</i>		20	Glenn, T. H., <i>Los Angeles</i>		9
Foard, F. T., <i>Santa Barbara</i>		26	Garcia, L. C., <i>San Francisco</i>		22	Glidden, R. Y., <i>Los Angeles</i>		9
Fogg, E. S., <i>Wasco</i>		7	Gardner, C. S., <i>Oakland</i>		1	Gliebe, P. A., <i>San Francisco</i>		22
Folkins, F. H., <i>Redlands</i>		20	Gardner, F. W., <i>Loma Linda</i>		20	Glycer, R. T., <i>Mountain View</i>		27
Folte, A. G., <i>San Francisco</i>		22	Gardner, F. M., <i>San Bernardino</i>		20	Gobar, F. H., <i>Fullerton</i>		15
Foord, A. G., <i>Pasadena</i>		9	Gardner, H. L., <i>San Francisco</i>		22	Gocher, T. E. P., <i>San Francisco</i>		22
Foote, C. G., <i>San Diego</i>		21	Gardner, K. D., <i>San Francisco</i>		22	Goddard, W. P., <i>Mill Valley</i>		10
Foote, F. S., <i>San Francisco</i>		22	Gardner, W. E., <i>Riverside</i>		17	Godfrey, E. B., <i>San Bernardino</i>		20
Forbes, H. J., <i>Pasadena</i>		9	Gardner, W. M., <i>Los Angeles</i>		9	Godshall, L. D., <i>Los Angeles</i>		9
Ford, H. G., <i>Richmond</i>		3	Garfinkle, F. E., <i>San Francisco</i>		22	Godwin, D. E., <i>Long Beach</i>		9
Ford, R. A., <i>Los Angeles</i>		9	Garland, L. H., <i>San Francisco</i>		22	Goeckerman, A. H., <i>Los Angeles</i>		9
Foree, L., <i>Oakland</i>		1	Garner, G. W., <i>Taft</i>		7	Goin, L. S., <i>Los Angeles</i>		9
Forline, H., <i>Los Angeles</i>		9	Garnett, A. S., <i>San Bernardino</i>		20	Goldberg, A. T., <i>Fresno</i>		4
Forsythe, J. S., <i>San Bernardino</i>		20	Garrett, F. H., <i>Patton</i>		20	Goldberg, M. B., <i>San Francisco</i>		22
Fortier, R. M., <i>Salinas</i>		13	Garrison, B. E., <i>Riverside</i>		17	Goldberg, P. H., <i>Los Angeles</i>		9
Fortson, G. R., <i>Susanville</i>		8	Garrison, O. H., <i>Oakland</i>		1	Goldberg, S. S., <i>Los Angeles</i>		9
Foshay, A. W., <i>Oakland</i>		1	Garrison, W. P., <i>Long Beach</i>		9	Golden, J. H., <i>San Francisco</i>		22
Foster, A. H., <i>Brawley</i>		6	Garstang, D. B., <i>Los Angeles</i>		9	Golding, D. G., <i>Santa Monica</i>		9
Foster, C. A., <i>Los Angeles</i>		9	Garth, W. L., <i>La Jolla</i>		21	Goldman, S. A., <i>San Francisco</i>		22
Foster, E. C., <i>Hanford</i>		4	Gaspard, F. J., <i>Los Angeles</i>		9	Goldman, V. S., <i>San Francisco</i>		22
Foster, G. A., <i>Sacramento</i>		18	Gassman, F., <i>Los Angeles</i>		9	Goldman, T. H., <i>Los Angeles</i>		9
Foster, H. E., <i>Berkeley</i>		1	Gasteiger, E. S., <i>Los Angeles</i>		9	Goldstein, J., <i>Los Angeles</i>		9
Foster, P. A., <i>Los Angeles</i>		9	Gates, C. Y., <i>San Francisco</i>		22	Goldwasser, M., <i>Los Angeles</i>		9
Fountain, E. R., <i>Merced</i>		12	Gates, M. G., <i>Ocean Park</i>		9	Golitzin, A. V., <i>Los Angeles</i>		9
Fowler, C. B., <i>Oakland</i>		1	Gates, M. J., <i>Santa Cruz</i>		28	Gomes, J. J., <i>Oakland</i>		1
Fowler, D. C., <i>Exeter</i>		35	Gatliff, W. W., <i>Butte City</i>		38	Gompertz, K. R., <i>Berkeley</i>		1
Fowler, G. W. J., <i>Santa Clara</i>		27	Gattuccio, B., <i>San Jose</i>		27	Gonzales, F. L. A., <i>San Francisco</i>		22
Fowler, H. L., <i>Los Angeles</i>		9	Gaulden, C. L., <i>Los Angeles</i>		9	Goodall, O. P., <i>Bakersfield</i>		7
Fox, C. M., <i>San Diego</i>		21	Gauthier, A. E., <i>San Francisco</i>		22	Goodman, M., <i>Stockton</i>		23
Fox, D. S., <i>Berkeley</i>		1	Gay, H. M., <i>Pasadena</i>		9	Goodwin, M., <i>Los Angeles</i>		9
Fox, H. W., <i>Tulare</i>		35	Gaynor, J. J., <i>Davenport</i>		28	Gordon, F. H., <i>Los Angeles</i>		9
Fox, L. H., <i>Bakersfield</i>		7	Geddes, M. A., <i>Carlotta</i>		5	Gordon, G. O., <i>Long Beach</i>		9
Fox, W. F., <i>El Centro</i>		6	Gehrels, E., <i>San Francisco</i>		22	Gordon, K. W., <i>Los Angeles</i>		9
Franc, P. W., <i>Elk Grove</i>		18				Gorham, C. B., <i>Monterey</i>		13
Francis, R. T., <i>Ornard</i>		37				Gosney, C. W., <i>Hollywood</i>		9

NAME	COUNTY	COUNTY SOCIETY NO.	NAME	COUNTY	COUNTY SOCIETY NO.	NAME	COUNTY	COUNTY SOCIETY NO.
Gossard, J. E., <i>Sierra Madre</i>		9	Hadden, D., <i>Oakland</i>		1	Hart, T. M., <i>Los Angeles</i>		9
Gottlieb, A., <i>Los Angeles</i>		9	Hadley, C. M., <i>Redlands</i>		20	Hart, V. W., <i>Yreka</i>		30
Gottschalk, A., <i>San Francisco</i>		22	Hadley, H. G., <i>Los Angeles</i>		9	Hart, W. E., <i>Yreka</i>		30
Gough, A. S., <i>El Segundo</i>		9	Haenszel, A. L., <i>San Bernardino</i>		20	Harter, T. H., <i>Pasadena</i>		9
Gold, N. B., <i>Modesto</i>		33	Hagan, B. J., <i>San Francisco</i>		22	Hartman, G. J., <i>Pasadena</i>		9
Gourley, J., <i>Livermore</i>		1	Hagan, R., <i>Los Angeles</i>		9	Hartman, G. W., <i>San Francisco</i>		22
Gowan, C. H., <i>Glendale</i>		9	Hagar, F. C., <i>Los Angeles</i>		9	Hartman, H., <i>Modesto</i>		33
Graeser, H. B., <i>Holtville</i>		6	Hagedorn, E. F., <i>Modesto</i>		33	Hartman, W. W., <i>Los Angeles</i>		9
Graham, H. B., <i>San Francisco</i>		22	Hagen, H., <i>San Luis Obispo</i>		24	Hartwell, R. W., <i>Beaumont</i>		17
Graham, H. K., <i>San Diego</i>		21	Hager, B. H., <i>Los Angeles</i>		9	Hartwig, L. G., <i>Los Angeles</i>		9
Graham, J. A., <i>Barstow</i>		20	Hagerty, T. W., <i>Spadra</i>		23	Harvey, J. E., <i>Pasadena</i>		9
Graham, J. P., <i>Los Angeles</i>		9	Hahn, L. W., <i>Berkeley</i>		1	Harvey, R. W., <i>San Francisco</i>		22
Graham, L., <i>Newberry</i>		20	Haig, T. R., <i>Sacramento</i>		18	Harvey, R. J., <i>Anaheim</i>		15
Graham, R. S., <i>Sacramento</i>		18	Haight, F. K., <i>Oakland</i>		1	Harwood, D. A., <i>Santa Ana</i>		15
Graham, R. E., <i>Oakland</i>		1	Haight, L. M., <i>Stockton</i>		23	Hashiba, G. K., <i>Fresno</i>		4
Grandstaff, F. L., <i>Preble, Ind.</i>		26	Halburg, C. T., <i>Burbank</i>		9	Haskell, H. A., <i>Windsor</i>		32
Granger, A. S., <i>Los Angeles</i>		9	Haldeman, K. O., <i>San Francisco</i>		22	Hastings, H., <i>Los Angeles</i>		9
Grant, B. E., Jr., <i>Glendale</i>		9	Hale, C. W., <i>Pomona</i>		9	Hastings, S. W., <i>Monterey</i>		13
Grant, J. F., <i>San Diego</i>		21	Hale, N. G., <i>Sacramento</i>		18	Hatch, W. G., <i>Santa Cruz</i>		28
Grant, R. F., <i>San Francisco</i>		22	Haley, P. S., <i>San Jose</i>		27	Hatfield, H. L., <i>Pasadena</i>		9
Gratiot, W. M., <i>Monterey</i>		13	Hall, C., <i>Oakland</i>		1	Hattery, H. H., <i>Los Angeles</i>		9
Grau, E. C., <i>Niles</i>		1	Hall, C. C., <i>Oakland</i>		1	Haven, M. N., <i>San Francisco</i>		22
Graun, R. E., <i>Los Gatos</i>		27	Hall, C., <i>Beverly Hills</i>		9	Hawes, R. E., <i>Huntington Beach</i>		15
Graves, J. H., <i>San Francisco</i>		22	Hall, E. H., <i>Vernon</i>		9	Hawk, C. L., <i>Hollywood</i>		9
Graves, J. M., <i>San Francisco</i>		22	Hall, E. M., <i>Los Angeles</i>		9	Hawkins, C. L., <i>Taft</i>		7
Graves, R. V., <i>Fullerton</i>		15	Hall, G. E., <i>Palo Alto</i>		27	Hawkins, G. A., <i>Reedley</i>		4
Gray, A. E., <i>Marysville</i>		39	Hall, G. J., <i>Sacramento</i>		18	Hawkins, G. G., <i>Madera</i>		4
Gray, E. H., <i>Woodland</i>		25	Hall, G. P., <i>San Jose</i>		27	Hawkins, H. M., <i>Los Angeles</i>		7
Gray, E., <i>Los Angeles</i>		9	Hall, G. S., <i>Los Angeles</i>		9	Hawkins, J. O., <i>San Rafael</i>		10
Gray, E. E., <i>Marysville</i>		39	Hall, J. H., <i>Sacramento</i>		18	Hawkins, L. P., <i>Los Angeles</i>		9
Gray, F. P., <i>San Francisco</i>		22	Hall, R. C., <i>San Diego</i>		21	Hawley, M. C., <i>Agnew</i>		27
Gray, G. A., <i>San Jose</i>		27	Halley, E. C., <i>Sanger</i>		4	Haworth, M. W., <i>Sacramento</i>		18
Gray, G. H., <i>Oakland</i>		1	Halloran, C. R., <i>Los Angeles</i>		9	Haworth, W. L., <i>Los Angeles</i>		9
Gray, H., <i>San Francisco</i>		22	Hambleton, H. G., <i>Los Angeles</i>		9	Hay, E. O., <i>Los Angeles</i>		9
Gray, J. P., <i>San Francisco</i>		22	Hambleton, M. P., <i>Fontana</i>		20	Hayden, C. T., <i>San Francisco</i>		22
Gray, J. R., <i>Carmel</i>		13	Hamer, C., <i>Glendale</i>		9	Hayes, C. M., <i>Los Angeles</i>		9
Gray, P. A., Jr., <i>Santa Barbara</i>		26	Hamilton, G. Van T., <i>Santa Barbara</i>		26	Hayes, E. W., <i>Monrovia</i>		9
Gray, R. N., <i>Hartford, Conn.</i>		22	Hamilton, J. K., Jr., <i>Alameda</i>		1	Haygood, A. G., <i>Downey</i>		9
Gray, R. M., <i>Indio</i>		17	Hamilton, J. R., <i>Los Angeles</i>		9	Hayhurst, D. E., <i>Ontario</i>		20
Green, A. S., <i>San Francisco</i>		22	Hamilton, R. L., <i>Marysville</i>		39	Haynes, F. W., <i>Los Angeles</i>		9
Green, B., Jr., <i>Riverside</i>		17	Hamilton, P. L., <i>Chico</i>		2	Haynes, J. R., <i>Los Angeles</i>		9
Green, D. M., <i>Los Angeles</i>		9	Hamlin, O. D., <i>Oakland</i>		1	Hayton, C. H., <i>Los Angeles</i>		9
Green, H. R., <i>Palo Alto</i>		27	Hamlin, R. E., <i>Santa Rosa</i>		32	Hazel, J. K., <i>San Francisco</i>		22
Green, J., <i>Los Angeles</i>		9	Hammack, R. W., <i>Los Angeles</i>		9	Hazeltine, M. E., <i>San Francisco</i>		22
Green, J. W., <i>Vallejo</i>		31	Hammond, N. E., <i>Los Angeles</i>		9	Heald, A. H., <i>San Francisco</i>		22
Green, L. D., <i>San Francisco</i>		22	Hand, F. B., <i>San Francisco</i>		22	Heald, E. S., <i>Berkeley</i>		1
Green, M. I., <i>San Francisco</i>		22	Hand, L. J., <i>San Francisco</i>		22	Hebert, A. W., <i>San Francisco</i>		22
Green, R. C., <i>Fullerton</i>		15	Hanford, F. W., <i>Los Angeles</i>		9	Hector, L. L., <i>Berkeley</i>		1
Greenbaum, G. B., <i>Los Angeles</i>		9	Hanley, B. J., <i>Los Angeles</i>		9	Hedberg, C. C., <i>San Francisco</i>		22
Greenbaum, L. H., <i>Los Angeles</i>		9	Hanlon, E. R., <i>Los Angeles</i>		9	Heddens, V. O., <i>Pasadena</i>		9
Greeno, C. G., <i>Los Angeles</i>		9	Hanlon, E. W., <i>San Francisco</i>		22	Hedges, L. A., <i>Richmond</i>		3
Greenway, H. H., <i>Los Angeles</i>		9	Hanlon, H. H., <i>Los Angeles</i>		9	Heffelfinger, M. A., <i>Los Angeles</i>		9
Greenwood, C. F., <i>Oakland</i>		1	Hanner, J. W., <i>Burlingame</i>		25	Heiges, L. E., <i>Lompoc</i>		26
Greenwood, E. N., <i>San Francisco</i>		22	Hansen, A. M., <i>Los Angeles</i>		9	Heimlich, A. F., <i>Redondo Beach</i>		9
Greer, E. D., <i>Oakland</i>		1	Hansen, O. J., <i>Redding</i>		29	Heln, G. E., <i>San Francisco</i>		22
Gregg, F. C., <i>Calexico</i>		6	Hanson, S., <i>Stockton</i>		23	Helnetz, M. A., <i>Oakland</i>		1
Gregg, H. J., <i>Calexico</i>		6	Hanze, H. G., <i>Solvang</i>		26	Heinzman, W. H., <i>San Francisco</i>		22
Gregory, C. A., <i>Sanitarium</i>		14	Hanzlik, P. J., <i>San Francisco</i>		25	Helssig, I., <i>Los Angeles</i>		9
Gregory, F. S., <i>Redwood City</i>		25	Happ, W. M., <i>Los Angeles</i>		9	Heitger, J. D., <i>Pasadena</i>		9
Gregory, H. L., <i>Stockton</i>		23	Hara, H. J., <i>Los Angeles</i>		9	Helsley, G. F., <i>San Francisco</i>		22
Gregory, L. C., <i>Pittsburg</i>		3	Hara, M. F., <i>Los Angeles</i>		9	Helstrom, G. L., <i>Fontana</i>		20
Gregory, W. A., <i>Oakland</i>		1	Harada, M. A., <i>San Francisco</i>		22	Hely, L. St. J., <i>Richmond</i>		3
Grey, C. A., <i>Burbank</i>		9	Harbaugh, O. S., <i>San Diego</i>		21	Hench, J. M., <i>Stockton</i>		23
Grieg, T. O., <i>Berkeley</i>		1	Harbaugh, R. W., <i>San Francisco</i>		22	Henderson, A. N., <i>Sacramento</i>		18
Griffin, C. F., <i>San Francisco</i>		22	Harbeck, C. J., <i>Los Angeles</i>		9	Henderson, H. E., <i>Santa Barbara</i>		26
Griffith, A. H., <i>Oakland</i>		1	Harbert, E., <i>Stockton</i>		23	Henderson, H. G., <i>San Francisco</i>		22
Grimmer, E. M., <i>Irvington</i>		1	Hardeman, V. V., <i>San Francisco</i>		22	Henderson, J. G., <i>San Francisco</i>		22
Griner, E. C., <i>Stockton</i>		23	Harder, W. R., <i>Los Gatos</i>		8	Henderson, R. G., <i>Long Beach</i>		9
Grishaw, W. H., <i>Los Angeles</i>		9	Hardgrave, L. E., <i>San Francisco</i>		22	Hendricks, F. R., <i>Ventura</i>		37
Grodsky, L. I., <i>San Francisco</i>		22	Harding, G. F., <i>Santa Monica</i>		9	Henke, G. B., <i>Ontario</i>		20
Groesbeck, M. J., <i>Porterville</i>		35	Harding, H. W., <i>Oakland</i>		1	Hennemuth, J. L., <i>Modesto</i>		33
Groff, S. H., <i>Ojai</i>		37	Harding, L. W., <i>Los Angeles</i>		9	Henning, B. H., <i>San Francisco</i>		22
Grogan, R. E., <i>Los Angeles</i>		9	Harding, M. C., <i>San Diego</i>		21	Henninger, L. L. R., <i>Pasadena</i>		9
Gross, H. G., <i>Eureka</i>		5	Harding-Mason, J., <i>San Francisco</i>		22	Henrich, A. G., <i>Los Angeles</i>		9
Grosse, A. B., <i>San Francisco</i>		22	Hardy, B. W., <i>Huntington Beach</i>		15	Henry, A. W., <i>San Leandro</i>		1
Gruber, F. G., <i>Santa Monica</i>		9	Harc, G. A., <i>Fresno</i>		4	Henry, M. G., <i>Los Angeles</i>		9
Grundy, G. M., <i>Newport Beach</i>		15	Hare, H. P., <i>Los Angeles</i>		9	Hensel, G. C., <i>San Francisco</i>		22
Guardino, S. J., <i>San Francisco</i>		22	Hare, R. A., <i>Santa Barbara</i>		26	Hepplewhite, J. G., <i>Chico</i>		2
Guedel, A. E., <i>Beverly Hills</i>		9	Harmon, E. D., <i>San Francisco</i>		22	Hepner, G. J., <i>San Francisco</i>		22
Guernsey, P. F., <i>Los Angeles</i>		9	Harmon, R. J. P., <i>Richmond</i>		3	Herman, B. S., <i>San Francisco</i>		22
Guerri, A. L., <i>Alameda</i>		1	Harner, C. E., <i>Long Beach</i>		9	Heron, I. C., <i>San Francisco</i>		22
Guidinger, W. E., <i>San Pedro</i>		9	Harner, H. R., <i>Los Angeles</i>		9	Herrick, A. B., Jr., <i>Santa Rosa</i>		32
Guido, F. R., <i>Visalia</i>		35	Harrington, J. T., <i>Santa Cruz</i>		28	Herrick, F. L., <i>Livermore</i>		1
Guilfoil, J. A., <i>San Francisco</i>		22	Harr, R. V., <i>Eldridge</i>		32	Herscher, H. L., <i>Los Angeles</i>		9
Guinan, E. R., <i>Richmond</i>		3	Harris, E. L., <i>Oakland</i>		1	Hershman, F., <i>Los Angeles</i>		9
Gumbiner, A. A., <i>Los Angeles</i>		9	Harris, F. I., <i>San Francisco</i>		22	Hertzog, F. C., <i>Long Beach</i>		9
Gummes, K. C., <i>Los Angeles</i>		9	Harris, H. I., <i>Los Angeles</i>		9	Herzikoff, S. S., <i>Los Angeles</i>		9
Gummig, E. A., <i>Pasadena</i>		9	Harris, H., <i>San Francisco</i>		22	Herzog, G. K., <i>San Francisco</i>		22
Gunderson, H. J., <i>Los Angeles</i>		9	Harris, J. M., <i>Los Angeles</i>		9	Hess, H. A., <i>San Francisco</i>		22
Gundrum, F. F., <i>Sacramento</i>		18	Harris, J. B., <i>Sacramento</i>		18	Hessel, V. E., <i>Los Angeles</i>		9
Gundrum, L. K., <i>Los Angeles</i>		9	Harris, M. W., <i>Novato</i>		10	Hethcock, E. E., <i>Los Angeles</i>		9
Gundrum, W. H., <i>Owensmouth</i>		9	Harris, R. H., <i>Los Angeles</i>		9	Heuler, Leo, <i>Fellows</i>		7
Gundry, F. J., <i>Bakersfield</i>		7	Harrison, E. S., <i>Gridley</i>		2	Heuschele, W. H., <i>San Jose</i>		27
Gunn, F. G., <i>Kelseyville</i>		14	Harrison, E., <i>Los Angeles</i>		9	Heylmun, H. H., <i>Long Beach</i>		9
Gunn, H., <i>San Francisco</i>		22	Harrison, F., <i>Gridley</i>		2	Hiatt, R. S., <i>Modesto</i>		33
Gunther, L., <i>Los Angeles</i>		9	Harrison, W. H., <i>San Francisco</i>		22	Hibben, J. S., <i>Pasadena</i>		9
Gustafson, A. W., <i>Gustine</i>		12	Harrison, W. J., <i>Alhambra</i>		9	Hicks, A. M., <i>San Francisco</i>		22
Gustafson, R. K., <i>Pasadena</i>		9	Harrop, L. L., <i>Los Angeles</i>		9	Hicks, J. R., <i>Tulare</i>		35
H			Hart, A. C., <i>Sacramento</i>		18	Hieronimus, A., <i>Oakland</i>		1
Haas, S. L., <i>San Francisco</i>		22	Hart, C. D., <i>San Francisco</i>		22	Higbee, D. R., <i>San Diego</i>		21
Haber, W. J., <i>San Francisco</i>		22	Hart, F. R., <i>Pacific Grove</i>		13	Higgs, D. W. P., <i>Chula Vista</i>		21
Hablutzel, C. E., <i>San Jose</i>		27	Hart, M. E., <i>San Francisco</i>		25	Higgins, C. P., <i>Oakland</i>		1
			Hart, R. C., <i>Yreka</i>		30	Higgins, I. W., <i>Live Oak</i>		39
						Hildreth, H. L., <i>Julian</i>		21

COUNTY			COUNTY			COUNTY		
NAME	COUNTY	SOCIETY NO.	NAME	COUNTY	SOCIETY NO.	NAME	COUNTY	SOCIETY NO.
Hileman, J. E., <i>San Diego</i>		21	Howson, C. R., <i>Los Angeles</i>		9	Jeffry, D. E., <i>Oakland</i>		1
Hilgesen, J., <i>Oakland</i>		1	Hoyt, H. S., <i>Pacific Grove</i>		13	Jeffs, M. D. W., <i>Los Angeles</i>		9
Hill, A. L., <i>Los Angeles</i>		9	Hoyt, W. F., <i>Berkeley</i>		1	Jehinck, J. J., <i>Los Angeles</i>		9
Hill, E. W., <i>San Andreas</i>		23	Hromadka, A. B., <i>Santa Monica</i>		9	Jellinek, E. O., <i>San Francisco</i>		22
Hill, E. J., <i>Eureka</i>		5	Hubbard, C. D., <i>Huntington Park</i>		9	Jelte, S. A., <i>Oakland</i>		1
Hill, H. P., <i>San Francisco</i>		22	Hubble, J. E., <i>Pomona</i>		9	Jenkins, B. E., <i>Oakland</i>		1
Hill, H. G., <i>Redlands</i>		20	Hubert, C. I., <i>Los Angeles</i>		9	Jenkins, H. L., <i>Arcata</i>		5
Hill, J. C., <i>Brawley</i>		6	Huff, G. D., <i>San Diego</i>		21	Jenkins, R. B., <i>Los Angeles</i>		9
Hill, L. R., <i>Long Beach</i>		9	Huff, L. J., <i>Los Angeles</i>		9	Jenney, W. C., <i>Vacaville</i>		31
Hill, M. R., <i>Los Angeles</i>		9	Huffman, H. G., <i>Santa Ana</i>		15	Jennings, G. D., <i>Covina</i>		9
Hill, R. C., <i>Exeter</i>		35	Huffman, L. D., <i>Los Angeles</i>		9	Jennison, J. E., <i>San Diego</i>		21
Hill, R. B., <i>Los Angeles</i>		9	Huggins, W. L., <i>Los Angeles</i>		9	Jensen, J. P., <i>Sonoma</i>		36
Hill, T. P., <i>Lakeport</i>		11	Hughes, J. E., <i>Vallejo</i>		31	Jensen, O. B., <i>Livermore</i>		1
Hill, W. B., <i>Long Beach</i>		9	Hull, E. H., <i>San Bernardino</i>		20	Jesberg, S., <i>Los Angeles</i>		9
Hiller, A. W., <i>Long Beach</i>		9	Hull, J. P., <i>Stockton</i>		23	Jewel, R. T., <i>Los Angeles</i>		9
Hilliard, C. G., <i>Redlands</i>		20	Hull, J. F., <i>Alhambra</i>		9	Jewett, R. A., <i>Los Angeles</i>		9
Hills, C. B., <i>Berkeley</i>		1	Hull, L. C., <i>Hollister</i>		19	Jimerson, J. R., <i>Long Beach</i>		9
Hillyard, L. V., <i>Los Angeles</i>		9	Hull, R. L., <i>Hollister</i>		19	Johannes, J. C., <i>Santa Cruz</i>		28
Hillyer, L., <i>Los Banos</i>		12	Humber, J. D., <i>San Francisco</i>		22	Johansen, E. A., <i>San Francisco</i>		22
Hilton, J. J., <i>Los Angeles</i>		9	Hummel, E. M., <i>Talmage</i>		11	Johansen, V. E., <i>Berkeley</i>		32
Hlman, F., <i>San Francisco</i>		22	Humphrey, W. H., <i>Oakland</i>		1	Johnson, A. L., <i>Taft</i>		7
Hippach, R. M., <i>Los Angeles</i>		9	Humphreys, J. M., <i>Sanger</i>		4	Johnson, C., <i>Los Angeles</i>		9
Hirshfeld, S., <i>Los Angeles</i>		9	Hund, H. O., <i>San Rafael</i>		10	Johnson, C. A., <i>Napa</i>		14
Hiscox, E. J., <i>Loma Linda</i>		20	Hunnicutt, L. G., <i>Pasadena</i>		9	Johnson, C. G., <i>Long Beach</i>		9
Hitchcock, H. H., <i>Oakland</i>		1	Hunsberger, H. S., <i>San Francisco</i>		22	Johnson, C. F., <i>Oakland</i>		1
Hixson, W. C., Jr., <i>Beverly Hills</i>		9	Hunt, R. A., <i>Riverdale</i>		4	Johnson, C. A., <i>Los Angeles</i>		9
Hoag, C. L., <i>San Francisco</i>		22	Hunt, V. C., <i>Los Angeles</i>		9	Johnson, C. E., <i>Long Beach</i>		9
Hoag, H. J., <i>San Jose</i>		27	Hunt, W. A., <i>Fresno</i>		4	Johnson, C. M., <i>San Francisco</i>		22
Hoagland, H., <i>Pasadena</i>		9	Hunt, W. R., <i>Santa Barbara</i>		26	Johnson, C. R., <i>Whittier</i>		9
Hobdy, W. C., <i>San Francisco</i>		22	Hunter, G. G., <i>Los Angeles</i>		9	Johnson, D. D., <i>Grass Valley</i>		16
Hodgdon, F. W., Jr., <i>Pasadena</i>		9	Hunter, P. M., <i>Pebble Beach</i>		13	Johnson, E. E., <i>Palo Alto</i>		27
Hodges, W. A., <i>La Vina</i>		9	Hunter, T. V., <i>Hollywood</i>		9	Johnson, E. H., <i>Los Angeles</i>		9
Hodgins, F. W., <i>Oakland</i>		1	Hunter, W. E., <i>South Gate</i>		9	Johnson, E. D. L., <i>Alhambra</i>		9
Hodgkin, P., <i>El Centro</i>		6	Hunter, W. E., <i>Los Angeles</i>		9	Johnson, G. M., <i>Los Angeles</i>		9
Hoffman, A. M., <i>Los Angeles</i>		9	Huntington, H. A., <i>Los Angeles</i>		9	Johnson, H. A., <i>Glendale</i>		9
Hoffman, H. V., <i>San Francisco</i>		22	Hurwitz, S. J., <i>San Francisco</i>		22	Johnson, H. R., <i>Sacramento</i>		18
Hoffman, L. H., <i>San Francisco</i>		22	Hurwitz, S. H., <i>San Francisco</i>		22	Johnson, H. H., <i>San Francisco</i>		22
Hoffman, P., <i>Marysville</i>		39	Husband, R. D., <i>Modesto</i>		33	Johnson, L. R., <i>Los Gatos</i>		23
Hoffman, R. O., <i>San Diego</i>		21	Huston, J. M., <i>Burlingame</i>		25	Johnson, M., <i>Los Angeles</i>		9
Hogg, R. L., <i>Saratoga</i>		27	Hutchings, R. K., <i>San Francisco</i>		22	Johnson, M. L., <i>Oakland</i>		1
Hogue, W. J., <i>Huntington Park</i>		9	Hutchinson, W. W., <i>Los Angeles</i>		9	Johnson, O. D., <i>Los Angeles</i>		9
Hohl, E. M., <i>Los Angeles</i>		9	Hutchison, C. W., <i>Los Angeles</i>		9	Johnson, O. F., <i>Sacramento</i>		18
Hoke, P. I., <i>Los Angeles</i>		9	Hutton, J. H., <i>Calipatria</i>		6	Johnson, R. H., <i>Los Angeles</i>		9
Holcomb, W. F., <i>Oakland</i>		1	Hyde, R. D., <i>Beverly Hills</i>		9	Johnson, W. C., <i>Pomona</i>		9
Holder, H. G., <i>San Diego</i>		21	Hyland, C. M., <i>Los Angeles</i>		9	Johnson, W. B., <i>Chico</i>		2
Holeman, G. S., <i>Centerville</i>		1	Hyman, S., <i>San Francisco</i>		22	Johnson, W. C., <i>Fellows</i>		7
Holladay, F. S., <i>Los Angeles</i>		9	I			Johnson, W. E., <i>Santa Barbara</i>		26
Holleran, J. F., <i>Los Angeles</i>		9	Ianne, C. L., <i>San Jose</i>		27	Johnston, E. J., <i>South Pasadena</i>		9
Holleran, G. C., <i>Brawley</i>		6	Ikl, G. S., <i>Sacramento</i>		18	Johnston, F. R., <i>Oakland</i>		1
Holleran, W. M., <i>Los Angeles</i>		9	Illick, C. R., <i>Santa Paula</i>		37	Johnston, H. A., <i>Anaheim</i>		15
Holley, W. W., <i>Inglewood</i>		9	Illsley, M. L., <i>Claremont</i>		9	Johnston, J., <i>Los Angeles</i>		9
Holliger, C. D., <i>Stockton</i>		23	Imerman, C. P., <i>Hollywood</i>		9	Johnston, S. T., <i>Santa Ana</i>		15
Hollingsworth, L. D., <i>Los Angeles</i>		9	Imerman, S. W., <i>Hollywood</i>		9	Johnston, W. H., <i>Santa Barbara</i>		26
Hollingsworth, M. W., <i>Santa Ana</i>		15	Ingalls, A. T., <i>Los Angeles</i>		9	Johnstone, E. M., <i>Pasadena</i>		9
Holm, E., <i>Eureka</i>		5	Inger, I. S., <i>San Francisco</i>		22	Johnstone, G. A., <i>Glendale</i>		9
Holman, E. F., <i>San Francisco</i>		22	Ingram, C. H., <i>Fresno</i>		4	Johnstone, W. A., <i>Hanford</i>		35
Holman, W. F., <i>Los Angeles</i>		9	Inman, M. M., <i>Los Angeles</i>		9	Jones, C. B., <i>Sacramento</i>		18
Holmer, V. C., <i>San Francisco</i>		22	Inman, T. G., <i>San Francisco</i>		22	Jones, C. P., <i>Grass Valley</i>		16
Holmes, O. M., <i>San Mateo</i>		25	Innis, E. C., <i>Los Angeles</i>		9	Jones, C. R., <i>San Diego</i>		21
Holmes, T. B., <i>E. Oakland</i>		1	Irish, C. W., <i>Pasadena</i>		9	Jones, C. W., <i>Hollywood</i>		9
Holmson, H., <i>Anaheim</i>		15	Irones, R. B., <i>San Diego</i>		21	Jones, E. F., <i>Oakland</i>		1
Holt, R. A., Jr., <i>Los Angeles</i>		9	Irvine, A. R., <i>Los Angeles</i>		9	Jones, E. W., <i>Los Angeles</i>		9
Holzman, A. J., <i>Santa Barbara</i>		26	Irvine, R. S., <i>San Francisco</i>		22	Jones, G. W., <i>Los Angeles</i>		9
Holzman, R. R., <i>Los Angeles</i>		9	Irwin, J. C., <i>Los Angeles</i>		9	Jones, G. F., <i>San Francisco</i>		22
Homback, F. J., <i>Santa Barbara</i>		26	Irwin, S. V., <i>Oakland</i>		1	Jones, H. W., <i>San Luis Obispo</i>		33
Homer, R. W., <i>Ventura</i>		27	Irwin, W. H., <i>Oakland</i>		1	Jones, H. L., <i>Los Angeles</i>		9
Homman, G. L., <i>Los Angeles</i>		9	Isaac, J. P., <i>Glendale</i>		9	Jones, H. T., <i>Los Angeles</i>		9
Homme, O. H., <i>Los Angeles</i>		9	Ishikawa, E., <i>Stockton</i>		23	Jones, I. H., <i>Los Angeles</i>		9
Hoolber, H. R., <i>Oakland</i>		1	Isardi, M., <i>San Francisco</i>		22	Jones, I. W., <i>Los Angeles</i>		9
Hooker, M. O., <i>Santa Barbara</i>		26	Isard, M. C., <i>Sacramento</i>		18	Jones, J. R., <i>Sacramento</i>		18
Hoover, E. F., <i>San Diego</i>		21	Ito, P. K., <i>Los Angeles</i>		9	Jones, J. W., <i>San Francisco</i>		22
Hoover, J. N., <i>Long Beach</i>		9	Ivey, E. D., <i>Oakland</i>		1	Jones, J. P., <i>Los Angeles</i>		9
Hope, R. B., <i>Los Angeles</i>		9	J			Jones, K. P., <i>Olive View</i>		9
Hopkins, E. K., <i>San Francisco</i>		22	Jackson, C. R., <i>Costa Mesa</i>		15	Jones, L. E., <i>Roseville</i>		16
Hopkins, H. H., <i>Fresno</i>		4	Jackson, E. A., <i>Atwater</i>		12	Jones, N., <i>Hollywood</i>		9
Hopkins, J. W., <i>Glendale</i>		9	Jackson, F. F., <i>Oakland</i>		1	Jones, N. R., <i>Sacramento</i>		18
Hopkins, M. F., <i>San Jose</i>		27	Jackson, J. E., <i>Los Angeles</i>		9	Jones, O. C., <i>Santa Maria</i>		26
Hopkins, M. A., <i>Sacramento</i>		18	Jackson, J. A., <i>Pasadena</i>		9	Jones, O. W., <i>San Anselmo</i>		10
Hopkirk, C. C., <i>Santa Monica</i>		9	Jackson, L. H., <i>W. Los Angeles</i>		9	Jones, O. W., Jr., <i>San Francisco</i>		22
Horn, C. E., <i>San Francisco</i>		22	Jacobs, A. M., <i>San Francisco</i>		22	Jones, R. B., <i>San Francisco</i>		22
Horner, C. D., <i>San Francisco</i>		22	Jacobs, F. E., <i>San Diego</i>		21	Jones, R. A., <i>San Francisco</i>		22
Horner, W. D., <i>San Francisco</i>		22	Jacobs, J., <i>San Francisco</i>		21	Jones, R. M., <i>Ventura</i>		37
Horst, W. W., <i>Wilmingtton</i>		9	Jacobs, J., <i>Hollywood</i>		9	Jones, R. M., <i>Bakersfield</i>		7
Horton, F. L., <i>Pomona</i>		9	Jacobs, L. C., <i>San Francisco</i>		22	Jones, W. H., <i>Long Beach</i>		9
Hosford, G. N., <i>San Francisco</i>		22	Jacobs, S. N., <i>San Francisco</i>		22	Jones, W. H. G., <i>Los Gatos</i>		27
Hoskins, G., <i>Long Beach</i>		9	Jacobs, W. R., <i>Stockton</i>		9	Jones, W. A., <i>Arlington</i>		17
Hosmer, C. M., <i>San Diego</i>		21	Jacobson, H. P., <i>Los Angeles</i>		9	Jones, Z. G., <i>Long Beach</i>		9
Hosmer, M. N., <i>San Francisco</i>		22	Jacobson, H. A., <i>Fresno</i>		4	Jordan, P. A., <i>San Jose</i>		27
Houck, G. H., <i>Los Angeles</i>		9	Jacobson, P. N., <i>Oakland</i>		1	Jorgenson, H. C., <i>San Diego</i>		21
Hough, R. C., <i>San Diego</i>		21	Jacobus, L. R., <i>Oakland</i>		1	Jorgenson, N., <i>Fresno</i>		4
Houghton, A. D., <i>San Fernando</i>		9	James, C. A., <i>Fresno</i>		4	Jorgenson, S. N., <i>San Francisco</i>		22
Houloose, J., <i>Long Beach</i>		9	James, C. S., <i>Los Angeles</i>		9	Josephs, L., <i>Los Angeles</i>		9
House, L. C., <i>El Centro</i>		6	James, R. J., <i>Los Angeles</i>		9	Josephson, J. B., <i>San Jose</i>		27
Houseworth, A. L., <i>Los Angeles</i>		9	James, V. M., <i>Glendale</i>		9	Judd, G. E., <i>Los Angeles</i>		9
Housman, N. S., <i>San Francisco</i>		22	Janes, O. W., <i>Glendale</i>		9	Judge, W. D., <i>Los Angeles</i>		9
Houston, A. J., <i>San Francisco</i>		22	Jardin, A., <i>Los Angeles</i>		9	Judson, H. A., <i>Santa Monica</i>		9
Houzvicka, O. A., <i>San Diego</i>		21	Jayet, A. C. A., <i>Santa Cruz</i>		28	Juenemann, G. F., <i>Los Angeles</i>		9
Hovde, A. G., <i>Los Angeles</i>		9	Jean, G. W., <i>Santa Barbara</i>		26	Julien, A. E., <i>Turlock</i>		33
Howard, B. F., <i>Sacramento</i>		18	Jeancon, E. C., <i>Los Angeles</i>		9	K		
Howard, C. E., <i>San Diego</i>		21				Kaarboe, O., <i>San Francisco</i>		22
Howard, G. R., <i>Bell</i>		9				Kaelber, A. P., <i>San Francisco</i>		22
Howe, R. D., <i>Redwood City</i>		38				Kaffesieder, L. I., <i>Los Angeles</i>		9
Howell, A. J., <i>Berkeley</i>		1						
Howitt, H. O., <i>San Rafael</i>		10						

NAME	COUNTY	COUNTY SOCIETY NO.	NAME	COUNTY	COUNTY SOCIETY NO.	NAME	COUNTY	COUNTY SOCIETY NO.
Kahl, C. W., <i>Merced</i>		12	Kistler, R. H., <i>San Francisco</i>		22	Lane, J. A., <i>Eureka</i>		5
Kahn, J., <i>Los Angeles</i>		9	Kitagawa, K. J., <i>San Francisco</i>		22	Lang, J. H., <i>Fullerton</i>		15
Kahn, M. G., <i>Los Angeles</i>		9	Kitsuda, F. Y., <i>Sacramento</i>		18	Langan, A. J., <i>San Pedro</i>		9
Kalfus, J. L., <i>Santa Maria</i>		26	Kittle, W. F., <i>Los Angeles</i>		9	Langdon, E. E., <i>Pasadena</i>		9
Kalichman, G. S., <i>Santa Monica</i>		9	Kiyasu, K., <i>San Francisco</i>		22	Langdon, S. W. R., <i>Stockton</i>		23
Kalman, S., <i>Berkeley</i>		16	Kjaerbye, C. P. H., <i>Fresno</i>		4	Langer, J., <i>Hilt</i>		30
Kane, L. M., <i>Los Angeles</i>		9	Klein, Israel, <i>Los Angeles</i>		9	Langley, R. W., <i>Los Angeles</i>		9
Kanner, H. M., <i>Sacramento</i>		18	Klein, J. M., <i>Hollywood</i>		9	Langnecker, H. L., <i>San Francisco</i>		22
Kaplan, H. E., <i>Stockton</i>		23	Klick, J. J., <i>Sacramento</i>		18	Langstroth, L., <i>San Francisco</i>		22
Kaplan, M., <i>Los Angeles</i>		9	Klussmann, H. O. G. T., <i>San Fran-</i>			Lanphere, G. H., <i>Los Angeles</i>		9
Kapp, M. W., <i>San Jose</i>		27	cisco.....		22	Larkey, J., <i>Oakland</i>		1
Kapp, R. W., <i>San Jose</i>		27	Klutho, J. C., <i>Los Angeles</i>		9	Larner, T. E., <i>Marysville</i>		39
Kaps, F. O., <i>Santa Ana</i>		15	Knapp, E. V., <i>San Francisco</i>		22	Larsen, A. E., <i>San Francisco</i>		22
Karaki, Y., <i>Los Angeles</i>		9	Kncshaw, R. S., <i>San Jose</i>		27	Larsen, J. W., <i>Paso Robles</i>		24
Karras, R. W., <i>Sawtelle</i>		9	Knight, L. C., <i>San Francisco</i>		22	Larson, A. E., <i>Los Angeles</i>		9
Karshner, R. G., <i>Los Angeles</i>		9	Knorp, W. F., <i>Burlingame</i>		25	Larson, A. H., <i>Los Angeles</i>		9
Katz, B., <i>Los Angeles</i>		9	Knorr, L. R., <i>Concord</i>		3	Larson, C. F., <i>Sausalito</i>		10
Kaufman, B., <i>San Francisco</i>		22	Knox, C. R., <i>El Cajon</i>		21	Larson, E. E., <i>Los Angeles</i>		9
Kavanagh, M. F., <i>San Francisco</i>		22	Kocher, R. A., <i>Carmel</i>		13	Larson, E. A., <i>Kingsburg</i>		4
Kavinoky, N. R., <i>Los Angeles</i>		9	Koda, K., <i>Watsonville</i>		28	Lartigau, A. J., <i>San Francisco</i>		22
Kay, G. L., <i>Placentia</i>		15	Koebig, W. C. S., <i>Los Angeles</i>		9	Larzalere, J. V., <i>Escondido</i>		21
Kay, M. M., <i>Shafter</i>		7	Koefod, H. O., <i>Santa Barbara</i>		26	Lasswell, B. J., <i>Quincy</i>		8
Kay, W. E., Jr., <i>San Francisco</i>		22	Koehler, A. E., <i>Santa Barbara</i>		26	Laton, G. P., <i>Los Angeles</i>		9
Kaysen, R., <i>San Diego</i>		21	Koenicke, H. J., <i>Salinas</i>		13	Latta, S. E., <i>Stockton</i>		23
Kearney, P. A., <i>San Francisco</i>		22	Koepke, F. H., <i>Watsonville</i>		28	Laubersheimer, G. A., <i>Los Angeles</i>		9
Kearney, W. B., <i>San Francisco</i>		22	Koetter, G. F., <i>Los Angeles</i>		9	Lauder, C. H., <i>Los Angeles</i>		9
Keating, V. J., <i>Los Angeles</i>		9	Koford, H., <i>Oakland</i>		1	Lavery, W. A., <i>Loyalton</i>		16
Keeler, N. S., <i>Oakland</i>		1	Kohlhase, L. H., <i>Los Angeles</i>		9	Law, C. H., <i>Weaverville</i>		24
Keenan, A. S., <i>San Francisco</i>		22	Kohlmoos, H. J., <i>Oakland</i>		1	Lawhead, H. D., <i>Woodland</i>		38
Keeney, M. J., <i>Los Angeles</i>		9	Kohn, F., <i>Tulare</i>		35	Lawler, P. W., <i>Victorville</i>		20
Keiper, G. F., <i>Los Angeles</i>		9	Kolda, F. O., <i>Alhambra</i>		9	Lawler, W. H., <i>Salinas</i>		13
Keith, C. F., <i>Williams</i>		38	Kolisch, J. M., <i>Los Angeles</i>		9	Lawson, J. D., <i>Sacramento</i>		38
Kelker, G. D., <i>San Rafael</i>		24	Konantz, O. F., <i>Hollywood</i>		9	Lawson, T. C., <i>Oakland</i>		1
Kell, F. B., <i>San Bernardino</i>		20	Konigmacher, A. H., <i>Fresno</i>		4	Lawyer, P. C., <i>Inglewood</i>		9
Keller, N. F., <i>Los Angeles</i>		9	Konttas, P. V., <i>Santa Rosa</i>		32	Layman, M. H., <i>San Francisco</i>		22
Keller, S. H., <i>Riverside</i>		17	Koplin, H., <i>Los Angeles</i>		9	Lazard, E. M., <i>Los Angeles</i>		9
Kelley, G. A., <i>Bridgeport</i>		4	Korshet, M., <i>San Francisco</i>		22	Lazelle, H. G., <i>La Jolla</i>		21
Kelley, J. W., <i>Los Angeles</i>		9	Kosky, A. W., <i>Santa Monica</i>		9	Leach, W. O., <i>Glendale</i>		9
Kelleyan, Y. K., <i>Los Angeles</i>		9	Kosky, A. A., <i>Santa Monica</i>		9	Leachman, R. S., <i>Vallejo</i>		31
Kellogg, E. C., <i>Los Angeles</i>		9	Kosterlitz, E., <i>Berkeley</i>		1	Leake, N. A., <i>Torrance</i>		9
Kellogg, L. C., <i>Loma Linda</i>		20	Kracaw, F. C., <i>Oakland</i>		1	Leake, W. H., <i>Los Angeles</i>		9
Kellogg, W. H., <i>Berkeley</i>		1	Kraft, R. W., <i>Pasadena</i>		9	Leavitt, A. S., <i>Los Angeles</i>		9
Kelly, E. E., <i>Pomona</i>		9	Krahulik, E. J., <i>Hollywood</i>		9	Leavitt, F. J., <i>Los Angeles</i>		9
Kelly, F. L., <i>Berkeley</i>		1	Kramar, I. G., <i>Fortuna</i>		5	Le Baron, R. O., <i>Talmage</i>		11
Kelly, T. H., <i>San Francisco</i>		22	Krause, R. A., <i>Los Angeles</i>		9	Ledford, R. M., <i>San Diego</i>		21
Kelsey, T. W., <i>Sacramento</i>		18	Kreinman, S. G., <i>Los Angeles</i>		9	Le Duc, I. E., <i>San Jose</i>		27
Kemper, C. A. S., <i>Escondido</i>		21	Kremers, E. D., <i>Pasadena</i>		9	Ledyard, C. C., <i>Los Angeles</i>		9
Kendall, O. J., <i>San Diego</i>		21	Kress, G. H., <i>Los Angeles</i>		9	Lee, D., <i>San Jose</i>		27
Kennedy, K. E., <i>Oakland</i>		1	Kretzschmar, K. E., <i>Los Angeles</i>		9	Lee, E. C., <i>San Diego</i>		21
Kennell, L. A., <i>San Diego</i>		21	Kristensen, W. A., <i>Los Angeles</i>		9	Lee, F. J., <i>Santa Monica</i>		9
Kenney, E. W., <i>Oakland</i>		1	Kreutzmann, H. A. R., <i>San Francisco</i>		22	Lee, F. W., <i>Sacramento</i>		18
Kennicott, R. H., <i>Los Angeles</i>		9	Kroener, W. F., <i>Whittier</i>		9	Lee, H. H., <i>San Jose</i>		27
Kergan, H. S., <i>Oakland</i>		1	Kroger, W. P., <i>Los Angeles</i>		9	Lec, J. S. M., <i>San Francisco</i>		22
Kerlan, M., <i>Beverly Hills</i>		9	Krohn, H. N., <i>Los Angeles</i>		9	Lee, L. H., <i>Los Angeles</i>		9
Kern, B. C., <i>Jackson</i>		18	Kroll, F. W., <i>San Francisco</i>		22	Lee, R. V. A., <i>Palo Alto</i>		27
Kerr, W. J., <i>San Francisco</i>		22	Krout, B. M., <i>Stockton</i>		23	Leech, C. R., <i>Walnut Creek</i>		3
Kerrick, S. E., <i>Hollywood</i>		9	Krueger, A. P., <i>Berkeley</i>		22	Lecf, E., <i>San Francisco</i>		22
Kersten, E. H. W., <i>Anaheim</i>		15	Krull, F., <i>Sacramento</i>		18	Lcct, N. B., <i>Oakland</i>		1
Kersten, H. M., <i>Los Angeles</i>		9	Kruse, F. H., <i>San Francisco</i>		22	Leet, R. S., <i>Oakland</i>		1
Keser, M. D., <i>Richmond</i>		3	Kruse, F. L., <i>San Francisco</i>		22	Leete, C. M., <i>Pasadena</i>		9
Kessler, E. E., <i>Los Angeles</i>		9	Kryder, G. B., <i>Glendale</i>		9	Lefler, A. B., <i>Los Angeles</i>		9
Key, W. A., <i>San Francisco</i>		22	Kuder, W. S., <i>Oakland</i>		1	Leftwich, O. T., <i>Oakland</i>		1
Keyes, H. R., <i>Los Angeles</i>		9	Kuhn, O. E., <i>Oakland</i>		1	Legge, R. T., <i>Berkeley</i>		1
Kibbe, M. E., <i>Oakland</i>		1	Kulaev, A. A. M., <i>San Francisco</i>		22	Leggitt, R. C., <i>Burbank</i>		9
Kibby, S. V., <i>Los Angeles</i>		9	Kurtz, C., <i>Los Angeles</i>		9	Leggo, R. C., <i>Crockett</i>		3
Kidder, F. W. K., <i>Los Angeles</i>		9	Kusel, E. A., <i>Oroville</i>		2	Lcidig, L. R., <i>Porterville</i>		35
Kiefer, H. A., <i>Los Angeles</i>		9	Kuser, J. H., <i>San Rafael</i>		10	Leimbach, J. H., <i>Isleton</i>		18
Kiger, W. H., <i>Los Angeles</i>		9	Kutzmann, A. A., <i>Los Angeles</i>		9	Lciva, C., <i>New York</i>		22
Kilbourne, N. J., <i>Los Angeles</i>		9	Kyddson, T. W., <i>Linden</i>		23	Leland, H. G., <i>Klamath</i>		5
Kilduff, R., <i>Oroville</i>		2	Kylberg, H., <i>Merced</i>		12	Leland, S., <i>San Francisco</i>		22
Kile, R. F., <i>San Francisco</i>		22				Lemere, H. B., <i>Los Angeles</i>		9
Kilgore, A. M., <i>Hollywood</i>		9				Lenahan, F. P., <i>San Diego</i>		21
Kilgore, A. R., <i>San Francisco</i>		22				Lcnahan, G. T., <i>San Francisco</i>		22
Kilgore, E. S., <i>San Francisco</i>		22				Lenahan, J. A., <i>San Francisco</i>		22
Kilgore, G. L., <i>San Diego</i>		21				Lcnker, W. D., <i>San Bernardino</i>		20
Kimball, T. S., <i>Los Angeles</i>		9				Lennon, M. B., <i>San Francisco</i>		22
Kimberlin, L. O., <i>San Francisco</i>		22				Lennon, T. J., <i>San Francisco</i>		22
Kindall, C. E., <i>Los Angeles</i>		9				Leonard, A. T., <i>San Francisco</i>		22
Kindall, L. E., <i>Oakland</i>		1				Leonard, E. M., <i>San Francisco</i>		22
King, C. S., <i>Los Angeles</i>		9				Leonard, J. V., <i>San Francisco</i>		22
King, E. B., <i>Arroyo Grande</i>		24				Leonard, W. E., <i>Los Angeles</i>		9
King, E. H., <i>Tujunga</i>		9				Lepper, L. E., <i>Los Angeles</i>		9
King, H. R., <i>Winters</i>		38				Lesem, A. M., <i>San Diego</i>		21
King, J. A., <i>Ojai</i>		37				Lessard, M. D., <i>South San Francisco</i>		25
King, J. C. E., <i>San Diego</i>		21				Lettice, F. E., <i>Los Angeles</i>		9
King, J. M., <i>Los Angeles</i>		9				Leuschner, C. E., <i>Los Angeles</i>		9
King, M. S., <i>Los Angeles</i>		9				Levengood, H. W., <i>Santa Monica</i>		9
Kinney, L. C., <i>San Diego</i>		21				Leveton, A. L., <i>San Francisco</i>		22
Kinney, M. A. J., <i>Los Angeles</i>		9				Levin, H. A., <i>Los Angeles</i>		9
Kindopp, D. M., <i>Colfax</i>		16				Levin, W., <i>Fresno</i>		4
Kinslow, F. A., <i>San Francisco</i>		22				Levison, C. G., <i>San Francisco</i>		22
Kirby, J. M., <i>Bakersfield</i>		7				Levitin, J., <i>San Francisco</i>		22
Kirchner, A. A., <i>San Fernando</i>		9				Leviton, H. I., <i>Los Angeles</i>		9
Kirchoff, J. J., <i>Los Angeles</i>		9				Lcivy, J. J., <i>Reedley</i>		4
Kirk, A. W., <i>San Francisco</i>		22				Levy, S., <i>Los Angeles</i>		9
Kirk, J. H., <i>Palo Alto</i>		27				Lew, G. H., <i>Los Angeles</i>		9
Kirk, M. E., <i>Oakland</i>		1				Lewis, C. H., <i>Santa Monica</i>		9
Kirkpatrick, J. E., <i>Los Angeles</i>		9				Lewis, C. E., <i>Auburn</i>		16
Kirkpatrick, J. L., <i>Los Angeles</i>		9				Lewis, E. B., <i>Los Angeles</i>		9
Kirkpatrick, J. H., <i>Los Angeles</i>		9				Lewis, E. R., <i>Los Angeles</i>		9
Kirsch, R. L., <i>Pasadena</i>		9				Lcwis, J. D., <i>Santa Barbara</i>		26
Kirwin, J. J., <i>Ukiah</i>		11				Lewis, K., <i>Beverly Hills</i>		9
Kiskadden, W. S., <i>Los Angeles</i>		9				Lcwis, L., <i>Eldridge</i>		32
Kistingner, W. F., <i>Santa Ana</i>		15				Lewis, L. R., <i>Los Angeles</i>		9

NAME	COUNTY	COUNTY SOCIETY NO.	NAME	COUNTY	COUNTY SOCIETY NO.	NAME	COUNTY	COUNTY SOCIETY NO.
Lewis, M. L., <i>Petaluma</i>		32	<i>M</i>			Martin, H. W., <i>Los Angeles</i>		9
Lewis, S. A., <i>Hollywood</i>		9				Martin, J. R., <i>Los Angeles</i>		9
Libby, A. A., <i>Pasadena</i>		9	Mabee, M., <i>Santa Ana</i>		15	Martin, J. F., <i>Los Angeles</i>		9
Liddell, E. B., <i>Los Angeles</i>		9	MacBeth, W. L. C., <i>El Monte</i>		9	Martin, J. P., <i>Oakland</i>		1
Lien, F. O., <i>Merced</i>		12	MacColl, D. R., <i>Los Angeles</i>		9	Martin, L. E., <i>Los Angeles</i>		9
Liles, L. M., <i>Watsonville</i>		28	MacCracken, W. B., <i>Berkeley</i>		1	Martin, M. L., <i>Los Angeles</i>		9
Lillencrantz, G. H., <i>Oakland</i>		1	MacDonald, F. A., <i>Sacramento</i>		18	Martin, P. T., <i>San Jose</i>		27
Liljedahl, E. N., <i>Los Angeles</i>		9	MacDonald, H. E., <i>Redding</i>		29	Martin, R. C., <i>San Francisco</i>		22
Liljencrantz, E., <i>Oakland</i>		1	MacDonald, R. P., <i>Los Angeles</i>		9	Martin, R. C., <i>San Bernardino</i>		20
Lilley, W. E., <i>Merced</i>		12	Mace, L. S., <i>San Francisco</i>		22	Martin, W. D., <i>Los Angeles</i>		9
Linde, F. G., <i>San Francisco</i>		22	MacGowan, D. G., <i>Los Angeles</i>		9	Martineau, A. S., <i>Los Angeles</i>		9
Lindberg, A. L., <i>Los Angeles</i>		9	Mack, A. E., <i>Glendale</i>		9	Martine, A., <i>La Jolla</i>		21
Lindenberg, F., <i>Los Angeles</i>		9	Mack, C. W., <i>Livermore</i>		1	Martins, S. M., <i>Los Angeles</i>		9
Lindquist, C. A., <i>Los Angeles</i>		9	Mackay, J. G., <i>Auburn</i>		16	Martyn, G., <i>Los Angeles</i>		9
Lindsay, C. V., <i>Encinitas</i>		21	Mackenzie, W. W., <i>Hollywood</i>		9	Marx, R., <i>Los Angeles</i>		9
Lindsay, H. C. L., <i>Pasadena</i>		9	Mackey, J. G., <i>San Fernando</i>		9	Marxer, W. L., <i>Los Angeles</i>		9
Lindsay, W. K., <i>Sacramento</i>		18	Mackintosh, W. C., <i>San Francisco</i>		22	Marxmiller, H. G., <i>Los Angeles</i>		9
Lindsley, St. C. R., <i>Los Angeles</i>		9	MacKlin, R. K., <i>Pasadena</i>		9	Mason, B. S., <i>San Jose</i>		27
Lineer, A. S., <i>Los Angeles</i>		9	MacLafferty, N. C., <i>Soquel</i>		28	Mason, B. B., <i>Laguna Beach</i>		15
Linhart, L. R., <i>Los Angeles</i>		9	MacLaughlin, R. W., <i>Los Angeles</i>		9	Mason, C. V., <i>Livermore</i>		1
Linn, J. L., <i>Glendale</i>		9	MacLean, H. G., <i>Oakland</i>		1	Mason, H. E., <i>Redwood City</i>		25
Linthicum, F. H., <i>Los Angeles</i>		9	MacLean, J., <i>Los Angeles</i>		9	Mason, M. I., <i>San Jose</i>		27
Lipkis, A., <i>Los Angeles</i>		9	MacLeish, A. C., <i>Los Angeles</i>		9	Mason, V. R., <i>Los Angeles</i>		9
Lipp, M. J., <i>Sacramento</i>		18	MacLennan, A. L., <i>Pasadena</i>		9	Mathé, C. P., <i>San Francisco</i>		22
Lippman, M. H., <i>San Francisco</i>		22	MacMillan, D. W., <i>Los Angeles</i>		9	Mathes, M. E., <i>San Francisco</i>		22
Lipson, B., <i>Los Angeles</i>		9	MacMillan, H. A., <i>Long Beach</i>		9	Mathews, S. S., <i>Los Angeles</i>		9
Lipson, I. M., <i>Visalia</i>		35	Macomber, E. B., <i>Burlingame</i>		25	Mathewson, C., <i>Fresno</i>		4
Lisser, H., <i>San Francisco</i>		22	Macomber, H. W., <i>Burlingame</i>		25	Mathewson, E., <i>Bostonia</i>		21
Lissner, H. H., <i>Los Angeles</i>		9	Macpherson, D. G., <i>San Francisco</i>		22	Matlock, T. T., <i>Waseo</i>		7
Lista, L. J., <i>Yreka</i>		30	Macpherson, F. L., <i>San Diego</i>		21	Matsumura, K., <i>San Francisco</i>		22
Liston, E., <i>Palo Alto</i>		27	Macpherson, J. F., <i>San Diego</i>		21	Mattison, C. W., <i>Los Angeles</i>		9
Little, E. W., <i>Los Angeles</i>		9	Macpherson, W. E., <i>Loma Linda</i>		20	Mattison, E. G., <i>Pasadena</i>		9
Little, R. P., <i>Santa Paula</i>		37	MacRae, A. D., <i>San Francisco</i>		22	Mattison, S. J., <i>Pasadena</i>		9
Little, T. C., <i>San Diego</i>		21	Madden, T. F., <i>Fresno</i>		4	Matzger, E., <i>San Francisco</i>		22
Livingston, W. R., <i>Ornard</i>		37	Madsen, L. J., <i>Santa Monica</i>		9	Matzke, D. E., <i>Carmel</i>		13
Lobingier, A. S., <i>Los Angeles</i>		9	Magan, P. T., <i>San Marino</i>		9	Maupin, J. L., Jr., <i>Fresno</i>		4
Lockwood, M. S., <i>National City</i>		21	Magan, S. S., <i>Covina</i>		9	Mawdsley, H. L., <i>San Mateo</i>		25
Lockwood, S. A., <i>National City</i>		21	Magan, W. P., <i>Covina</i>		9	Maxson, E. S., <i>Alhambra</i>		9
Lodge, E. S., <i>Los Angeles</i>		9	Maghy, C. A., <i>Los Angeles</i>		9	Maxwell, A. F., <i>San Francisco</i>		22
Loe, H. D., <i>Oakland</i>		1	Magrath, W. A. S., <i>Oakland</i>		1	Maxwell, R. E., <i>Modesto</i>		33
Loehr, B. E., <i>San Jose</i>		27	Mahan, D. J., <i>Santa Rosa</i>		32	May, H. C., <i>Los Angeles</i>		9
Logan, N. H., <i>Oakland</i>		1	Mahan, L. B., <i>San Diego</i>		21	May, J. A., <i>San Diego</i>		21
Logsdon, R. O., <i>San Diego</i>		21	Mahannah, L. D., <i>Long Beach</i>		9	May, L. B., <i>Bakersfield</i>		7
Lohmann, H. G., <i>Oakland</i>		1	Mahoney, L. E., <i>Santa Monica</i>		9	Mayer, H. J., <i>Los Angeles</i>		9
Lohse, J. L., <i>Oakland</i>		1	Main, R. C., <i>Santa Barbara</i>		26	Mayers, M. M., <i>Los Angeles</i>		9
Loizeaux, E. S., <i>San Diego</i>		21	Majer, R. G., <i>Los Angeles</i>		9	Mayes, W. C., <i>Santa Ana</i>		15
Lokrantz, S. R., <i>Los Angeles</i>		9	Majors, E. A., <i>Oakland</i>		1	Mayfield, C., <i>Long Beach</i>		9
Lonergan, L., <i>Loma Linda</i>		20	Makinson, F. R., <i>Oakland</i>		1	Mayman, E., <i>Modesto</i>		33
Long F. E., <i>Los Angeles</i>		9	Malaby, Z. T., <i>Pasadena</i>		9	Maynard, M. T-R., <i>San Jose</i>		27
Long, G. L., <i>Fresno</i>		4	Malis, S., <i>Los Angeles</i>		9	Mayne, W. H., <i>Los Angeles</i>		9
Long J. C., <i>San Francisco</i>		22	Malkin, G. M., <i>Huntington Park</i>		9	Mays, A. H., <i>Sausalito</i>		10
Long, S. C., <i>Bakersfield</i>		7	Mallery, J. H., <i>San Fernando</i>		21	McAllister, H. R., <i>Taft</i>		7
Longabaugh, R. I., <i>Vallejo</i>		31	Malmgren, G. E., <i>Los Angeles</i>		9	McAllister, O. O. T., <i>Oakland</i>		1
Look, H. H., <i>Sacramento</i>		18	Malone, F. F., <i>Los Angeles</i>		9	McAnally, J. F., <i>Roseville</i>		18
Loomis, F. M., <i>Oakland</i>		1	Malone, M. C., <i>San Francisco</i>		22	McArthur, A. W., <i>Lincoln</i>		16
Loos, H. C., <i>Los Angeles</i>		9	Malone, W. M., <i>San Francisco</i>		22	McArthur, D. D., <i>Los Angeles</i>		9
Looser, R. V., <i>Hollywood</i>		9	Maloney, H. P., <i>Oakland</i>		1	McArthur, P. R., <i>Los Angeles</i>		9
Lopizich, I. J., <i>Los Angeles</i>		9	Malsbary, G. E., <i>Los Angeles</i>		9	McAtee, J. S., <i>Los Angeles</i>		9
Lordan, J. P., <i>Los Angeles</i>		9	Mandel, G., <i>Merico</i>		9	McAuley, J., <i>Santa Ana</i>		15
Lorentz, R., Jr., <i>San Francisco</i>		22	Mandeville, F. B., <i>Oakland</i>		1	McBride, R. W., <i>Burlingame</i>		25
Lorenz, H. E., <i>Sacramento</i>		18	Maner, G. D., <i>Los Angeles</i>		9	McBride, W. C., Jr., <i>Yreka</i>		30
Loring, F. W., <i>Glendale</i>		9	Mangan, L. A., <i>Wilmington</i>		9	McBurney, B. A., <i>Pomona</i>		9
Loughlin, E. L., <i>Los Angeles</i>		9	Mangan, P. J., <i>San Francisco</i>		22	McBurney, R. D., <i>Los Angeles</i>		9
Lounsberry, C. R., <i>San Diego</i>		21	Manley, D. J., <i>Hayward</i>		1	McCallister, C. H., <i>Los Angeles</i>		9
Loutzenheiser, J. J., <i>San Francisco</i>		22	Mann, H. H., <i>Los Angeles</i>		9	McCann, D. B., <i>Los Angeles</i>		9
Lovas, A., <i>San Francisco</i>		9	Mann, V. L., <i>Los Angeles</i>		9	McCann, D. F., <i>McCloud</i>		30
Love, C. A., Jr., <i>San Bernardino</i>		20	Manning, T. P., <i>Los Angeles</i>		9	McCann, F. E., <i>Monrovia</i>		9
Love, E. C., <i>Calistoga</i>		14	Manning, W. R., <i>Fillmore</i>		37	McCarthy, F. E., <i>San Francisco</i>		22
Lovejoy, E. D., <i>Los Angeles</i>		9	Mansfeldt, J. H., <i>San Francisco</i>		22	McCarthy, H. L., <i>Los Angeles</i>		9
Lovely, J. P., <i>San Jose</i>		27	Mansfield, T. D., <i>Huntington Park</i>		9	McCarthy, J. B., <i>Carmel</i>		13
Loveren, G. S., <i>Santa Barbara</i>		26	Manson, G., <i>Fresno</i>		4	McCarty, I. A., <i>Los Angeles</i>		9
Low, T. C., <i>Los Angeles</i>		9	Manson, R. M., <i>Hayward</i>		1	McCarty, H., <i>Agnew</i>		27
Lowe, F. A., <i>San Francisco</i>		22	Mantle, V. M., <i>Los Angeles</i>		9	McCarty, R. B., <i>Riverside</i>		17
Lowman, C. L. R., <i>Los Angeles</i>		9	March, W. B., <i>Burson</i>		23	McCausland, W. S., <i>Chula Vista</i>		21
Lubin, M. L., <i>San Francisco</i>		22	Marchildon, J. W., <i>Los Angeles</i>		9	McChesney, G. J., <i>San Francisco</i>		22
Lucas, W., <i>Los Angeles</i>		9	Marcus, D. B., <i>Imperial</i>		6	McCleave, T. C., <i>Berkeley</i>		1
Lucas, W. C., <i>Los Angeles</i>		9	Marcus, H., <i>San Francisco</i>		22	McClelland, E. S., <i>Los Angeles</i>		9
Lucas, W. P., <i>San Francisco</i>		22	Mardis, B. A., <i>San Francisco</i>		22	McClelland, J. H., <i>San Francisco</i>		22
Lucas, W. S., <i>Richmond</i>		3	Mark, A. E., <i>Hollywood</i>		9	McClendon, S. J., <i>San Diego</i>		21
Lucey, D. D., <i>Los Angeles</i>		9	Markel, H. H., <i>San Francisco</i>		22	McClure, G., <i>Oakland</i>		1
Luckie, J. B., <i>Pasadena</i>		9	Markolf, H. F., <i>Pasadena</i>		9	McClure, J. C., <i>Lindsay</i>		35
Luechauer, K. D., <i>Coalinga</i>		4	Marks, J. H., <i>Los Angeles</i>		9	McClure, J. L., <i>San Francisco</i>		22
Lum, D. D., <i>Alameda</i>		1	Marks, M., <i>Long Beach</i>		9	McClurkin, A. A., <i>Los Angeles</i>		9
Lum, T. A., <i>Dos Palos</i>		12	Marks, S. H., <i>Pittsburg</i>		3	McColl, J. M., <i>San Diego</i>		21
Lum, W. T., <i>Alameda</i>		1	Markthaler, E. L., <i>Santa Barbara</i>		26	McColl, W. F., <i>San Diego</i>		21
Lumsden, A. G., <i>Petaluma</i>		32	Marnell, F. S., <i>Stockton</i>		23	McCombs, V., <i>Los Angeles</i>		9
Lund, E. S., <i>Willows</i>		38	Maroon, J. L., <i>Santa Ana</i>		15	McConnell, O. G., <i>San Jose</i>		27
Lund, Le V., <i>Los Angeles</i>		9	Marquis, C. E., <i>Oakland</i>		1	McCool, J. L., <i>San Francisco</i>		22
Lundegaard, E. M., <i>Oakland</i>		1	Marsan, D. A., <i>Oakland</i>		1	McCool, W. F., <i>Los Angeles</i>		9
Lundquist, D. T., <i>Palo Alto</i>		27	Marsden, C. S., <i>San Diego</i>		21	McCoskey, G., <i>Stockton</i>		23
Lunsford, C. J., <i>Oakland</i>		1	Marsden, S. A., <i>Santa Ana</i>		15	McCoy, C. A., <i>Los Angeles</i>		9
Lurie, S. A., <i>Los Angeles</i>		9	Marsh, C., <i>Sebastopol</i>		32	McCoy, E. T., <i>Los Angeles</i>		9
Lusignan, H. R., <i>Montcrey</i>		13	Marsh, O. G., <i>San Diego</i>		21	McCradie, R. D., <i>Oakland</i>		1
Luton, G. R., <i>Santa Barbara</i>		26	Marshall, B. M., <i>Eureka</i>		5	McCrary, J. G., <i>San Francisco</i>		22
Luttrell, P. H., <i>San Francisco</i>		22	Marshall, H. K., <i>Glendale</i>		9	McCrea, F. R., <i>Long Beach</i>		9
Lyle, A. G., <i>San Francisco</i>		22	Marshall, J. M., <i>San Luis Obispo</i>		24	McCue, J. E., <i>Crows Landing</i>		33
Lyman, G. D., <i>San Francisco</i>		22	Marshall, O. C., <i>Watsonville</i>		28	McCullough, F. E., <i>Sacramento</i>		18
Lyman, T., <i>Sacramento</i>		18	Marston, C. B., <i>San Rafael</i>		10	McCullough, J. M., <i>Crockett</i>		3
Lynch, E. C., <i>Montebello</i>		9	Marston, H. E., <i>San Rafael</i>		10	McCullough, W. A., <i>Van Nuys</i>		9
Lynch, F. W., <i>San Francisco</i>		22	Martell, B. S., <i>Santa Ana</i>		15	McDonald, A. C., <i>Huntington Park</i>		9
Lynch, J. G., <i>Los Angeles</i>		9	Martin, A. L., <i>Hayward</i>		1	McDonald, G. H., <i>Ocean Beach</i>		21
Lynch, W. P., Jr., <i>Stockton</i>		23	Martin, A. T., <i>Los Angeles</i>		9	McDonald, J., <i>San Francisco</i>		22
Lyster, T. C., <i>Los Angeles</i>		9	Martin, E. P. C., <i>San Diego</i>		21	McDonnell, C. H., <i>Sacramento</i>		18
			Martin, G. S., <i>Susanville</i>		8	McDowell, B. E., <i>Merced</i>		12

NAME	COUNTY	SOCIETY NO.	NAME	COUNTY	SOCIETY NO.	NAME	COUNTY	SOCIETY NO.
McDowell, C. A., Covina.....		9	Meyenberg, W. D., Salinas.....		13	Moore, N. L., Santa Ana.....		15
McElhinney, P. P. B., Long Beach..		9	Meyer, A. J., Glendale.....		9	Moore, O. M., Bell.....		9
McElroy, B. F., San Francisco.....		22	Meyer, H., San Francisco.....		22	Moore, P. H., Hollywood.....		9
McFarlane, A. H., Mountain View....		27	Meyer, W. F., San Diego.....		21	Moore, R., Los Angeles.....		9
McGarvey, H., Atascadero.....		24	Meyers, E. M., Oakland.....		1	Moore, T. V., San Jose.....		27
McGavack, T. H., San Francisco.....		22	Meyers, E. L., Chico.....		2	Moore, W. G., San Francisco.....		22
McGee, R. P., Los Angeles.....		9	Michael, L., San Leandro.....		1	Moore, W. H., Bakersfield.....		7
McGibbon, D., Los Angeles.....		9	Michael, P. P., Oakland.....		1	Moose, R. M., San Bernardino.....		20
McGinnis, J. J., New York.....		22	Michelson, L., San Francisco.....		22	Moots, C. W., Mentone.....		20
McGovney, R. B., Los Angeles.....		9	Michelson, L., San Francisco.....		22	Mordoff, C. E., Oakland.....		1
McGranahan, J. H., Long Beach.....		9	Mikels, B. M., Long Beach.....		9	Morgan, F. E., Santa Cruz.....		28
McGrath, A. K., Sonoma.....		14	Mikels, F. M., Hollywood.....		9	Morgan, F. R., Van Nuys.....		9
McGuinness, J. E., San Francisco.....		22	Miles, R. H., Alameda.....		1	Morgan, F. L., Venice.....		9
McGuire, J. J., San Francisco.....		22	Miles, S. H., Olive View.....		9	Morgan, J. W., San Francisco.....		22
McGuire, T. E., Burbank.....		9	Miles, W. L., Los Angeles.....		9	Morgan, J. D., Jr., Fresno.....		4
McGurk, R. T., Stockton.....		23	Millholland, W. G., Fresno.....		4	Morgan, N. D., San Francisco.....		22
McHugh, T. R., Los Angeles.....		9	Miller, A. W., Riverside.....		17	Morison, C. C., Oakland.....		1
McIntosh, A. M., Berkeley.....		1	Miller, A. V., Porterville.....		35	Morris, C. A., Bakersfield.....		7
McKay, E. E., Hollister.....		19	Miller, C. H., San Leandro.....		1	Morris, C. L., Eagle Rock.....		9
McKay, W. T., Long Beach.....		9	Miller, C. M., Jr., Olive View.....		9	Morris, E., Auberry.....		4
McKee, C. B., Sacramento.....		18	Miller, E. M., Los Gatos.....		27	Morris, J. K., Jr., Modesto.....		33
McKee, E. N., Eagle Rock.....		9	Miller, E. P., Riverside.....		17	Morris, K. G., Petaluma.....		32
McKee, K. S., Bakersfield.....		7	Miller, F. W., Los Angeles.....		9	Morris, L. M., San Francisco.....		22
McKee, W. C., Los Angeles.....		9	Miller, H. A., Alameda.....		1	Morris, M., San Francisco.....		22
McKeehan, G. O., Los Angeles.....		9	Miller, H. A., Los Angeles.....		22	Morris, R. L., San Francisco.....		22
McKeever, F. M., Los Angeles.....		9	Miller, H. E., San Francisco.....		22	Morris, R. H., San Francisco.....		22
McKellar, J. H., Pasadena.....		9	Miller, H., Los Angeles.....		20	Morrison, L. F., San Francisco.....		22
McKelvy, R. W., Los Angeles.....		9	Miller, I. S., Colton.....		20	Morrison, N. D., San Mateo.....		25
McKenna, W. J., Los Angeles.....		9	Miller, J. E., West Los Angeles.....		9	Morrison, R. J., Santa Monica.....		9
McKenney, A. C., Jr., San Francisco		22	Miller, L. G., Inglewood.....		14	Morrison, W. A., Los Angeles.....		9
McKenney, A. C., San Francisco.....		22	Miller, N., Porterville.....		35	Morrissey, E. J., San Francisco.....		22
McKenney, J. A., Oakland.....		1	Miller, O. A., Talmage.....		11	Morrow, H., San Francisco.....		22
McKenney, P. W., Alturas.....		8	Miller, R. F., Los Angeles.....		9	Morse, D. L., San Francisco.....		22
McKenzie, C. R., Oakland.....		1	Miller, R. W., Los Angeles.....		9	Morse, H. A., Oakland.....		1
McKenzie, R. B., San Francisco.....		22	Miller, R. R., Pasadena.....		9	Mortensen, E. S., Santa Monica.....		9
McKibbin, J., Los Angeles.....		9	Miller, S. J., Long Beach.....		9	Mortensen, W. S., Santa Monica.....		9
McKibbin, F. W., Oakland.....		33	Miller, T., San Diego.....		21	Morton, A. W., San Francisco.....		22
McKinnon, A. A., Placerville.....		18	Miller, T. K., Patton.....		20	Morton, D. G., San Francisco.....		22
McKinnon, D. D., Los Angeles.....		9	Miller, W. J., Los Angeles.....		9	Morton, L. B., Los Angeles.....		9
McKinnon, G. W., Arcata.....		5	Miller, W. McC., Auburn.....		16	Mosby, G., Oakland.....		1
McKnight, W. B., Portola.....		8	Milliken, W. P., Oakland.....		1	Mosher, W. F., Ventura.....		37
McLain, L. C., Bakersfield.....		7	Mills, C. F., Pismo Beach.....		24	Motheral, R., Hanford.....		4
McLaren, J. L., Bell.....		9	Mills, L. H., Los Angeles.....		9	Motley, E. G., Santa Ana.....		15
McLaughlin, R. C., Los Angeles.....		9	Mills, W., Oakland.....		1	Mott, E. L., Fresno.....		4
McLaughlin, T. H., Hollywood.....		9	Millspaugh, W. P., Los Angeles.....		9	Mottram, L. D., Modesto.....		33
McLean, D., Sacramento.....		18	Millzner, R. J., San Francisco.....		22	Moulton, D. H., Chico.....		2
McLeish, A. H., Yountville.....		14	Milo, H. W., Mountain View.....		27	Moulton, E. S., Corning.....		34
McLellan, G. H., San Diego.....		21	Minaker, A. J., San Francisco.....		22	Mountford, G. T., Coalinga.....		4
McLeod, F. L., Los Angeles.....		9	Miner, L. L., Los Angeles.....		9	Movitt, S. I., Los Angeles.....		9
McLeod, J. H., Santa Rosa.....		32	Misch, H. B., Los Angeles.....		9	Movius, C. M., Los Angeles.....		9
McManus, F. P., Esparto.....		38	Missner, F. R., Oakland.....		1	Movius, H. J., Los Angeles.....		9
McMillan, E. H., Pasadena.....		9	Mitchell, C. O., Fresno.....		4	Moyle, C. A., Merced.....		12
McMullin, S., Yuba City.....		39	Mitchell, H. H., Oakland.....		1	Muckleston, H. S., Los Angeles.....		9
McMurdo, P. F., San Francisco.....		22	Mitchell, V. H., San Francisco.....		22	Mudd, J. L., Merced.....		12
McMurtry, M. S., Clovis.....		4	Mitchell, W. E., Berkeley.....		1	Mudd, S. G., Pasadena.....		9
McNab, T. R., Los Angeles.....		9	Miyasaki, J. H., Sacramento.....		18	Mueller, R. R., Los Angeles.....		9
McNamara, D. H., Santa Barbara.....		26	Miyata, Y., Los Angeles.....		9	Mugford, I. K., Sacramento.....		18
McNamara, T. M., Jr., Bakersfield..		7	Mizel, M. L., San Francisco.....		22	Mugler, F. R., San Luis Obispo.....		24
McNealy, F. E., Los Angeles.....		9	Mock, D. C., Redlands.....		20	Muhl, A. M., San Diego.....		21
McNeil, D., Sacramento.....		38	Modern, F. S., Los Angeles.....		9	Mulder, E. I., Compton.....		9
McNeil, H. G., Los Angeles.....		9	Moes, R. J., Los Angeles.....		9	Mulfinger, C. L., Los Angeles.....		9
McNeil, W. T., Stockton.....		23	Moffat, W. McK., Santa Barbara.....		26	Mullaly, E. F., Vallejo.....		31
McNeile, L. G., Los Angeles.....		9	Moffett, E. D., Berkeley.....		1	Mullen, E. W., Agnew.....		27
McNeile, O. M., Los Angeles.....		9	Moffitt, E. J., Los Angeles.....		9	Mullen, J. L., Sacramento.....		18
McNulty, A. H., San Francisco.....		22	Moffitt, H. C., San Francisco.....		22	Mullen, T. F., San Francisco.....		22
McPharlin, J. H., Salinas.....		13	Moffitt, T. W., Hollywood.....		9	Muller, H. P., Modesto.....		33
McPhee, V. C., San Francisco.....		22	Mogan, R. F., Los Angeles.....		9	Mulligan, H. R., Hollywood.....		9
McPheeters, E. R., Modesto.....		33	Mohun, C. C., Jr., San Francisco.....		22	Mullinax, C. E., Los Angeles.....		9
McPherson, M. D., Santa Cruz.....		28	Mohun, M., San Mateo.....		25	Mulvehill, W. W., Los Angeles.....		9
McQuade, J., San Francisco.....		22	Molgaard, J., San Francisco.....		25	Munch, O. L., San Luis Obispo.....		24
McReynolds, R. P., Los Angeles.....		9	Molitor, N., San Diego.....		21	Munter, E. J., San Francisco.....		22
McWhirter, W. L., Centerville.....		1	Mollath, A. L., Guadalupe.....		26	Murakami, K., Salinas.....		13
Meads, F. J., Los Angeles.....		9	Molony, W. R., Los Angeles.....		9	Murphy, H. C., Salinas.....		13
Meads, A. M., Oakland.....		1	Molony, W. R., Jr., Los Angeles.....		9	Murphy, J. E., Sacramento.....		18
Meals, R. W., Los Angeles.....		9	Monaco, S. R., Los Angeles.....		9	Murphy, P. J., Los Angeles.....		9
Means, P. C., Santa Barbara.....		26	Monson, L. F. P., San Francisco.....		1	Murphy, W. H., San Mateo.....		25
Medigovich, D. V., Los Angeles.....		9	Montalvan, J., Oakland.....		1	Murray, D. H., Napa.....		14
Meherin, J. M., San Francisco.....		22	Monteith, R. F., Redwood City.....		25	Murray, H. W., Pasadena.....		9
Mehlin, G. B., San Diego.....		21	Montgomery, A. B., San Francisco.....		9	Murray, S., Los Angeles.....		9
Mehrmann, H. B., Oakland.....		1	Montgomery, C. H., Los Angeles.....		9	Murrieta, A. J., Los Angeles.....		9
Meininger, L. L., San Francisco.....		22	Montgomery, D. W., San Francisco.....		22	Musante, A. S., San Francisco.....		22
Meininger, W. M., San Francisco.....		22	Montgomery, J. L., Los Angeles.....		9	Musser, L. P., Oakland.....		1
Meland, O. N., Los Angeles.....		9	Montgomery, M. F., San Francisco.....		22	Myers, C., Los Angeles.....		9
Melkonian, L., Gilroy.....		27	Montgomery, M. L., San Francisco.....		22	Myers, E. E., Boston.....		16
Mellinger, W. J., Santa Barbara.....		26	Montgomery, R. R., Long Beach.....		9	Myers, G. E., Los Angeles.....		9
Melnick, L. I., Los Angeles.....		9	Montgomery, W. O., San Francisco.....		22	Myers, L., San Diego.....		21
Melvin, J. T., Porterville.....		35	Moodie, A. R., Taft.....		7	Myers, O. R., Eureka.....		5
Mendelsohn, L., Saratoga.....		27	Moody, A. M., San Francisco.....		22	Myers, T. C., Los Angeles.....		9
Meneray, P. A., Santa Rosa.....		32	Moody, E. E., Los Angeles.....		9			
Mensor, M. C., San Francisco.....		22	Mooney, H. S., Los Angeles.....		9			
Mentzer, M. J., San Francisco.....		22	Mooney, T. S., Springville.....		35			
Mentzer, S. H., San Francisco.....		22	Moor, F. B., Loma Linda.....		20			
Meredith, H. H., Oakland.....		1	Moore, A. H., Los Angeles.....		9			
Merkle, H. J., Los Angeles.....		9	Moore, A. W., Los Angeles.....		9			
Merrill, B. E., Oakland.....		1	Moore, C. E., San Jose.....		27			
Merrill, E. R., Santa Barbara.....		26	Moore, C. B., San Francisco.....		22			
Merrill, H. P., Los Angeles.....		9	Moore, D. S., South Pasadena.....		9			
Merrill, J. A., Monterey.....		13	Moore, E. C., Los Angeles.....		9			
Merrill, R. E., Burbank.....		9	Moore, G. W., Los Angeles.....		9			
Merrill, W. I., Campbell.....		27	Moore, G., Oakland.....		1			
Merrithew, E. W., Martinez.....		3	Moore, H. A., Berkeley.....		1			
Merritt, E. S., San Francisco.....		22	Moore, J. B., Fresno.....		4			
Metcalf, J. T., Los Angeles.....		9	Moore, L. A. R., San Francisco.....		22			
Mettier, S. R., San Francisco.....		22	Moore, L. S., San Jose.....		27			

COUNTY			COUNTY			COUNTY		
NAME	COUNTY	SOCIETY NO.	NAME	COUNTY	SOCIETY NO.	NAME	COUNTY	SOCIETY NO.
Nelson, A. N., <i>Los Angeles</i>		9	O'Hara, J. J., <i>San Diego</i>		21	Parsegan, J. H., <i>San Francisco</i>		22
Nelson, C. E., <i>Los Angeles</i>		9	Ohnemuller, C. E., <i>Los Angeles</i>		9	Parsons, E. W., <i>San Francisco</i>		22
Nelson, C. E., <i>England</i>		14	Okonogi, B., <i>Fresno</i>		4	Parsons, H. H., <i>San Bernardino</i>		20
Nelson, C. V., <i>Los Angeles</i>		9	Oldenbourg, L. A., <i>Berkeley</i>		1	Parsons, J. J., <i>Monrovia</i>		9
Nelson, E. A., <i>Los Angeles</i>		9	Olberg, F. H., <i>Redding</i>		29	Parsons, L., <i>Los Angeles</i>		9
Nelson, F. H., <i>Los Angeles</i>		9	Olds, W. H., <i>Los Angeles</i>		9	Parsons, S. R., <i>Los Angeles</i>		9
Nelson, H. C., <i>Santa Ana</i>		15	Oliver, H. R., <i>San Francisco</i>		22	Pasette, S. E., <i>Los Angeles</i>		9
Nelson, J. E., <i>Lodi</i>		23	Oliver, J. A., <i>San Francisco</i>		22	Patek, S. D., <i>San Francisco</i>		22
Nelson, R. C., <i>Beverly Hills</i>		9	Oliver, W. A., <i>San Francisco</i>		25	Paterson, F. H., <i>Santa Ana</i>		15
Nelson, R. F., <i>Oakland</i>		1	Olmsted, R. C., <i>Pasadena</i>		9	Patriek, M. A., <i>Los Angeles</i>		9
Nemir, A., <i>San Francisco</i>		22	Olsen, C. W., <i>Los Angeles</i>		9	Patterson, E. A., <i>Oakland</i>		1
Nesehe, G. E., <i>Oakland</i>		1	Olsen, D. M. R., <i>Berkeley</i>		1	Patterson, G. H., <i>Los Angeles</i>		9
Nethereut, R. A., <i>San Francisco</i>		22	Olsen, E. R., <i>San Francisco</i>		22	Patterson, G. L., <i>Santa Rosa</i>		32
Neubert, A. D., <i>Redlands</i>		20	Olsen, R. S., <i>Los Angeles</i>		9	Patterson, J. A., <i>San Bernardino</i>		20
Neumann, E. V., <i>Hollywood</i>		9	Olsen, S., <i>San Francisco</i>		22	Patton, E. F., <i>Los Angeles</i>		9
Neville, J. E., <i>Glendale</i>		9	Olsen, X., <i>San Bernardino</i>		20	Patton, R. F., <i>Los Angeles</i>		9
Nevin, J. L., <i>San Bernardino</i>		20	Olson, G. M., <i>Los Angeles</i>		9	Paul, J. W., <i>Santa Clara</i>		27
Nevius, F. P., <i>Antioch</i>		3	Olson, G. W., <i>Fullerton</i>		15	Paull, R. A., <i>La Jolla</i>		21
Nevius, J. W., <i>Los Angeles</i>		9	Omelveña, J. G., <i>San Diego</i>		21	Paup, M. K., <i>Corona</i>		17
Newbecker, C. G., <i>Hanford</i>		4	O'Neal, R. M., <i>Santa Monica</i>		9	Paxman, D. G., <i>Oakland</i>		1
Newberry, F. J., <i>Los Angeles</i>		9	O'Neil, F. H., <i>San Clemente</i>		15	Payton, W. B., <i>Riverside</i>		17
Newcomb, A. T., <i>Pasadena</i>		9	O'Neill, B. J., Jr., <i>San Diego</i>		21	Pchelkin, N. A., <i>San Francisco</i>		22
Newell, E., <i>San Jose</i>		27	O'Neill, J. R., <i>San Francisco</i>		22	Pearee, C. M., <i>Oakland</i>		1
Newell, R. R., <i>San Francisco</i>		15	Onesti, S. J., <i>San Francisco</i>		22	Pearee, W. M., <i>Wilmington</i>		9
Newkirk, H. D., <i>Anaheim</i>		22	Opdyke, R., <i>Beverly Hills</i>		9	Pearl, F. L., <i>San Francisco</i>		22
Newman, A., <i>San Francisco</i>		22	Ophüls, W., <i>San Francisco</i>		22	Pearl, F. A., <i>Los Angeles</i>		9
Newman, H. P., <i>San Diego</i>		21	Oppenheimer, L. I., <i>Oakland</i>		1	Pearson, C. A., <i>Turlock</i>		33
Newman, H. W., <i>San Francisco</i>		22	Orbison, T. J., <i>Los Angeles</i>		9	Pearson, E. A., <i>Los Angeles</i>		9
Newman, L., <i>San Francisco</i>		22	Oreutt, A. H., <i>Oakland</i>		1	Pearson, R. G., <i>Sacramento</i>		18
Newman, M. H., <i>Los Angeles</i>		9	O'Reilly, B. C. N., <i>San Francisco</i>		22	Peddicoord, H., <i>Redwood City</i>		25
Newman, W. H., <i>San Diego</i>		21	Orella, F. R., <i>San Francisco</i>		22	Peers, R. A., <i>Colfax</i>		16
Newman, W. W., <i>San Francisco</i>		22	Orme, R. E., <i>San Francisco</i>		22	Peers, R. S., <i>Oakland</i>		1
Newmark, P., <i>Los Angeles</i>		9	Ormsby, E. A., <i>Centerville</i>		1	Peery, L. T., <i>Berkeley</i>		1
Newton, H. E., <i>San Francisco</i>		22	Orr, J., <i>Oakland</i>		1	Peirsol, E. C., <i>Claremont</i>		9
Newton, A. H., <i>Dunsmuir</i>		30	Orsborn, E. V., <i>Fairfax</i>		22	Pelkan, K. F., <i>San Jose</i>		27
Newton, E. B., <i>Oakland</i>		1	Osborn, H. B., <i>Fillmore</i>		37	Peluso, J. D., <i>Los Angeles</i>		9
Newton, H. D., <i>San Diego</i>		21	Osborne, A. E., <i>Los Gatos</i>		27	Pendergrass, C. I., <i>Clovis</i>		4
Newton, J. W., <i>Los Angeles</i>		9	Osborne, C. J., <i>San Diego</i>		21	Pendergrass, J. E., <i>Clovis</i>		4
Newton, W. C., <i>San Diego</i>		21	Osborne, R. H., <i>Los Angeles</i>		9	Pendleton, W., <i>Los Angeles</i>		9
Nieholas, C. Z., <i>Santa Barbara</i>		26	Osburn, J. N. N., <i>Los Angeles</i>		9	Peoples, S. Z., <i>Petaluma</i>		32
Nichols, J. N., <i>Los Angeles</i>		9	Ostroff, R. A., <i>San Francisco</i>		22	Peppers, C. H., <i>Los Angeles</i>		9
Nichols, R. E., <i>Woodland</i>		38	Otis, M. R., <i>Los Angeles</i>		9	Percy, J. F., <i>Los Angeles</i>		9
Nichols, R. C., <i>Ontario</i>		20	Otis, N. M., <i>Santa Monica</i>		9	Perkins, A., <i>Oakland</i>		1
Nicholson, J. W., <i>Porterville</i>		35	O'Toole, C. S., <i>Anaheim</i>		15	Perkins, S. F., <i>Los Angeles</i>		9
Nicholson, J., <i>Los Angeles</i>		9	Ottinger, M. R., <i>San Francisco</i>		22	Perkins, W. A., <i>Oakland</i>		1
Nicholson, R. M., <i>Los Angeles</i>		9	Otto, F. W., <i>Los Angeles</i>		9	Perry, C. G., <i>Sausalito</i>		10
Nicola, T. C., <i>Montebello</i>		9	Overstreet, L. J., <i>San Francisco</i>		22	Perry, J. R., <i>West Hollywood</i>		9
Nicoll, J. R. P., <i>Santa Ana</i>		15	Oviedo, G. F., <i>San Francisco</i>		22	Perry, O. H., <i>Marysville</i>		39
Niebel, H. L., <i>Palo Alto</i>		27	Oviedo, L. J., <i>San Francisco</i>		22	Perzik, S. L., <i>Los Angeles</i>		9
Niebergall, H. A., <i>Los Angeles</i>		9	Owen, C. S., <i>National City</i>		21	Peteh, P. H., <i>Oakland</i>		1
Nielsen, H. W., <i>Fowler</i>		4	Owen, C. C., <i>San Bernardino</i>		20	Peters, C. E., <i>Oakland</i>		1
Nielsen, J. C. E., <i>San Diego</i>		21	Owen, E. D., <i>San Francisco</i>		22	Peters, C., <i>San Francisco</i>		22
Nielsen, J. W., <i>San Luis Obispo</i>		24	Owen, G. R., <i>Los Angeles</i>		9	Peters, H. E., <i>Pittsburg</i>		3
Nielsen, J. M., <i>Los Angeles</i>		9	Owens, R. L., <i>Lodi</i>		23	Peters, L., <i>Alameda</i>		1
Nielsen, L. R., <i>Fresno</i>		4	Owens, W. R., <i>Glendale</i>		9	Petersen, D., <i>Behar, India</i>		4
Nielson, M. M., <i>Los Angeles</i>		9	Oyler, J. D., <i>Los Angeles</i>		9	Petersen, H. E., <i>San Fernando</i>		9
Niemand, F. G., <i>San Francisco</i>		22	P			Petersen, H. C., <i>Stockton</i>		23
Nies, C. A., <i>Los Angeles</i>		9	Paeë, P. T., <i>San Jose</i>		27	Peterson, A. A., <i>Los Angeles</i>		9
Nippert, E. F., <i>Los Angeles</i>		9	Paekard, L. A., <i>Bakersfield</i>		7	Peterson, A., <i>Los Angeles</i>		9
Nisbet, T. W., <i>Pasadena</i>		9	Padden, E. H., <i>Oakland</i>		1	Peterson, E. A., <i>Vallejo</i>		31
Nittler, A. N., <i>Santa Cruz</i>		28	Paez, J., <i>San Diego</i>		21	Peterson, F. W., <i>El Centro</i>		6
Nixon, A. C., <i>Hollywood</i>		9	Page, B. H., <i>San Mateo</i>		25	Peterson, W. W., <i>San Francisco</i>		8
Nixon, C. E., <i>Fresno</i>		4	Page, C. W., <i>Berkeley</i>		1	Petr, F., <i>Turlock</i>		33
Nixon, N. K., <i>Los Angeles</i>		9	Page, P. F., Jr., <i>Taft</i>		7	Petter, R. S., <i>Los Angeles</i>		9
Noall, E. T., <i>Santa Rosa</i>		32	Page, W. E., <i>Oakland</i>		1	Pettis, J. H., <i>Fresno</i>		4
Noble, B. E., <i>Los Angeles</i>		9	Pahl, P. C. H., <i>Los Angeles</i>		9	Pettit, A. V., <i>San Francisco</i>		22
Noble, T. E., <i>Long Beach</i>		9	Paige, G. A., <i>Anaheim</i>		15	Pettler, S. H., <i>Los Angeles</i>		9
Noel, M. S., <i>San Francisco</i>		22	Paine, N. C., <i>Glendale</i>		9	Petty, C. O., <i>Fullerton</i>		15
Noetling, P. R., <i>Angels Camp</i>		23	Palamountain, W. B., <i>Oakland</i>		1	Pfueger, O. H., <i>San Francisco</i>		22
Nolan, O. F., <i>San Francisco</i>		22	Pallais, A., <i>Los Angeles</i>		9	Phelan, C. A., <i>San Francisco</i>		22
Nolan, T. J., <i>San Francisco</i>		22	Pallette, E. M., <i>Los Angeles</i>		9	Phillips, A. D., <i>Sacramento</i>		18
Norman, G. F., <i>Eureka</i>		5	Palmer, B. M., <i>Oakland</i>		1	Phillips, A. L., <i>Santa Cruz</i>		28
Norris, C. E., <i>Eureka</i>		5	Palmer, B., <i>Santa Monica</i>		9	Phillips, C. E., <i>Los Angeles</i>		9
Norris, W. J., <i>Los Angeles</i>		9	Palmer, C. B., <i>San Francisco</i>		22	Phillips, L. F. E., <i>Palo Alto</i>		27
Northrop, R. S., <i>Napa</i>		14	Palmer, E. O., <i>Hollywood</i>		9	Phillips, P. T., <i>Santa Cruz</i>		28
Norton, C. W., <i>Los Angeles</i>		9	Palmer, R. S., <i>Pomona</i>		9	Phillips, W. A., <i>Ben Lomond</i>		28
Norton, F. L., <i>Los Angeles</i>		9	Palmer, W. B., <i>Long Beach</i>		9	Philp, W. S., <i>Los Angeles</i>		9
Nuttall, J. P., <i>Santa Monica</i>		9	Parish, H. L., <i>Oakland</i>		1	Pickard, R. J., <i>San Diego</i>		21
Nutting, F. J., <i>Santa Monica</i>		9	Parizek, F. J., <i>Los Angeles</i>		9	Pideock, J. W., <i>Hollywood</i>		9
Nutting, R. J., <i>Oakland</i>		1	Park, D. B., <i>Vallejo</i>		31	Pier, H. McK., <i>Oakland</i>		1
Nuzum, F. R., <i>Santa Barbara</i>		26	Parker, A. S., <i>Merced</i>		12	Pierce, G. W., <i>San Francisco</i>		22
O			Parker, C. H., <i>Pasadena</i>		9	Pierce, H. M., <i>Riverside</i>		17
Oakleaf, D. C., <i>Cloverdale</i>		32	Parker, F. B., <i>Oakland</i>		1	Pierce, H. F., <i>Santa Barbara</i>		26
Oatman, H. C., <i>San Diego</i>		21	Parker, G., <i>Salinas</i>		13	Pierce, S. N., <i>Los Angeles</i>		9
Oatman, H. C., Jr., <i>San Diego</i>		21	Parker, H. R., <i>Oakland</i>		1	Pieron, P. H., <i>San Francisco</i>		22
O'Brien, H. J., <i>Los Angeles</i>		9	Parker, J. A., <i>Merced</i>		12	Pillsbury, S. G., <i>Long Beach</i>		9
O'Brien, J. W., <i>Sacramento</i>		18	Parker, J. T., <i>Oakland</i>		1	Pimental, G. B., <i>Los Banos</i>		12
O'Brien, J. J., <i>Los Angeles</i>		9	Parker, J. L., <i>Brawley</i>		6	Pindell, M. L., <i>Los Angeles</i>		9
O'Connor, G. B., <i>San Francisco</i>		22	Parker, J. A., <i>Los Angeles</i>		9	Pindler, L. A., <i>Los Angeles</i>		9
O'Connor, J. H., <i>San Francisco</i>		22	Parker, L. O., <i>San Francisco</i>		22	Piness, G., <i>Los Angeles</i>		9
O'Connor, R. E., <i>Los Angeles</i>		9	Parker, T. A., <i>La Jolla</i>		21	Pinkham, C. B., <i>San Francisco</i>		22
O'Connor, R. P., <i>Oakland</i>		1	Parker, W. B., <i>Los Angeles</i>		9	Pinkley, V. M., <i>San Bernardino</i>		20
O'Connor, T. C., Jr., <i>Murphy</i>		23	Parkin, V., <i>Los Angeles</i>		9	Pinney, I., <i>Stockton</i>		23
O'Connor, T. H., <i>San Francisco</i>		22	Parkinson, R. H., <i>San Francisco</i>		22	Piper, H. E., <i>Santa Cruz</i>		28
O'Donnell, E. W., <i>Los Angeles</i>		9	Parkinson, S. N., <i>Oakland</i>		1	Pisichel, D. K., <i>San Francisco</i>		22
O'Donnell, F. J., <i>Stockton</i>		23	Parkinson, W. B., <i>Tulare</i>		35	Pischel, K., <i>San Francisco</i>		22
Oechsli, W. R., <i>Olive View</i>		9	Parks, B. K., <i>Long Beach</i>		9	Piscitelli, A. M., <i>San Francisco</i>		22
Offield, A. L., <i>Burlingame</i>		25	Parks, F. R., <i>Los Angeles</i>		9	Pitkin, H. C., <i>San Francisco</i>		22
Ogden, R. A., <i>Hollywood</i>		9	Parks, J. A., <i>San Diego</i>		21	Pitts, E. H., <i>Sacramento</i>		18
O'Grady, W. E., <i>San Francisco</i>		22	Parowski, S. A., <i>San Diego</i>		21	Pius, C., <i>Yreka</i>		30
Ohannesian, F., <i>Sacramento</i>		18	Parrish, G., <i>Los Angeles</i>		9	Plane, J. F., <i>Long Beach</i>		9
Ohanneson, J., <i>Alameda</i>		1	Parrott, J. C., <i>San Francisco</i>		22	Plank, T. H., <i>San Francisco</i>		22
O'Hara, F. P., <i>San Diego</i>		21				Plath, H. W., <i>Oakland</i>		1
						Platt, J. E., <i>Pasadena</i>		9

NAME	COUNTY	SOCIETY NO.	NAME	COUNTY	SOCIETY NO.	NAME	COUNTY	SOCIETY NO.
Player, L. P., <i>San Francisco</i>		22	Rajotte, E. C. F., <i>San Francisco</i>		22	Richards, D. N., <i>Oakland</i>		1
Pleth, V., <i>Santa Rosa</i>		32	Rakitin, S. S., <i>San Francisco</i>		22	Richards, R. L., <i>Santa Barbara</i>		26
Plimpton, E. B., <i>Los Angeles</i>		9	Rambo, W. H., <i>Los Angeles</i>		9	Richards, S. B., <i>San Bernardino</i>		20
Plymire, D. B., <i>San Francisco</i>		22	Rammelt, W., <i>Los Angeles</i>		9	Richter, C., <i>Balboa Beach</i>		15
Poage, C. A., <i>Colusa</i>		38	Ramsay, R. E., <i>Pasadena</i>		9	Richter, I. M., <i>Santa Barbara</i>		26
Podstata, V. H., <i>San Francisco</i>		1	Rand, C. W., <i>Los Angeles</i>		9	Rickabaugh, H. B., <i>Alhambra</i>		9
Poheim, J. F., <i>San Francisco</i>		22	Randall, S. B., <i>Santa Cruz</i>		28	Rickard, J. F., <i>San Francisco</i>		22
Polesky, F. A., <i>Los Angeles</i>		9	Randel, H. A., <i>Fresno</i>		4	Rickmond, A. E., <i>Oakland</i>		1
Poley, C. W., <i>Los Angeles</i>		9	Rankin, A. H., <i>San Francisco</i>		22	Rigdon, R. L., <i>San Francisco</i>		22
Polia, J. A., <i>Los Angeles</i>		9	Rankin, E. P., <i>Berkeley</i>		1	Riggin, L. L., <i>Pasadena</i>		9
Pollock, W. E., <i>Sacramento</i>		18	Rankin, T. J., <i>San Diego</i>		20	Righetti, H., <i>San Francisco</i>		22
Pomeroy, G. T., <i>Burbank</i>		9	Ransom, D. H., <i>Madera</i>		4	Rindlaub, J. H., <i>Fargo North Dakota</i>		9
Pomeroy, J. L., <i>Los Angeles</i>		9	Ransom, J. K., <i>Modesto</i>		33	Ring, O. A., <i>San Francisco</i>		22
Poole, R. E., <i>Yountville</i>		14	Ranson, J. R., <i>San Luis Obispo</i>		24	Rinkenberger, F. W., <i>Los Angeles</i>		9
Pope, E. W., <i>San Francisco</i>		22	Rapaport, H., <i>Los Angeles</i>		9	Rinne, F. A., <i>San Francisco</i>		22
Pope, F. S., <i>Santa Ana</i>		15	Rapaport, W., <i>Oakland</i>		1	Risley, E. H., <i>Loma Linda</i>		20
Pope, S. T., <i>San Francisco</i>		22	Rasor, C., <i>Oakland</i>		1	Rixford, E., <i>San Francisco</i>		22
Pope, W. H., <i>Sacramento</i>		18	Rathbone, R. H., <i>Los Angeles</i>		9	Rixford, H. C., <i>Mountain Home, Idaho</i>		22
Porter, C. C., <i>San Francisco</i>		22	Rathbun, W. T., <i>Colusa</i>		38	Roath, C., <i>Los Angeles</i>		9
Porter, E. E., <i>San Jose</i>		27	Ratliff, H. L., <i>Riverside</i>		17	Robarts, H. P., <i>San Francisco</i>		22
Porter, E. B., <i>Coronado</i>		21	Ratner, R., <i>San Francisco</i>		21	Robbins, A. C., <i>Garden Grove</i>		15
Porter, G. S., <i>Los Angeles</i>		9	Ratty, F. J., <i>San Diego</i>		21	Robbins, A. R., <i>Los Angeles</i>		9
Porter, J. A., <i>Modesto</i>		33	Raulston, B. O., <i>Los Angeles</i>		9	Robbins, B., <i>Hanford</i>		4
Porter, R. L., <i>San Francisco</i>		22	Rawhauser, J. L., <i>Willows</i>		38	Robbins, D. R., <i>Los Angeles</i>		9
Porter, W. S., <i>Oakland</i>		1	Rawlins, A. G., <i>San Francisco</i>		22	Roberts, D. N., <i>San Jose</i>		27
Post, J. O., <i>Los Angeles</i>		9	Ray, E. B., <i>Bellflower</i>		9	Roberts, A. M., <i>Los Angeles</i>		9
Pottenger, F. M., <i>Monrovia</i>		9	Ray, F. S., <i>Los Angeles</i>		9	Roberts, E. K., <i>Los Angeles</i>		9
Pottenger, F. M., Jr., <i>Monrovia</i>		9	Ray, H. H., <i>San Mateo</i>		25	Roberts, G. W., <i>Oakland</i>		1
Pottenger, J. E., <i>Monrovia</i>		9	Ray, L., <i>Santa Rosa</i>		32	Roberts, J. G., <i>Pomona</i>		9
Pottenger, R. T., <i>Monrovia</i>		9	Rea, B. J., <i>Sacramento</i>		18	Roberts, J. M., <i>Los Angeles</i>		9
Potter, C. D., <i>San Francisco</i>		22	Rea, R. R., <i>Los Angeles</i>		9	Roberts, W. H., <i>Pasadena</i>		9
Potter, G., <i>Oakland</i>		1	Rea, S. L., <i>Ukiah</i>		11	Robertson, D. L., <i>Modesto</i>		33
Potter, M. J. M., <i>San Diego</i>		21	Rea, T., <i>Berkeley</i>		30	Robertson, G., <i>San Francisco</i>		22
Potter, P. S., <i>Berkeley</i>		1	Read, F. T., <i>Glendale</i>		9	Robertson, H. M., <i>Santa Ana</i>		15
Potter, W. H., <i>San Diego</i>		21	Read, J. M., <i>San Francisco</i>		22	Robertson, H. P., <i>Los Angeles</i>		9
Potts, J. E., <i>Los Angeles</i>		9	Ready, F. L., <i>Los Angeles</i>		9	Robertson, J. C., <i>Modesto</i>		33
Pouppirt, P. S., <i>San Francisco</i>		22	Ream, M. P., <i>San Leandro</i>		1	Robertson, J. W., Jr., <i>Livermore</i>		1
Powell, A., <i>Oakland</i>		1	Reamer, E. F., <i>Modesto</i>		33	Robinson, J., <i>Anaheim</i>		15
Powell, B. J., <i>Stockton</i>		23	Reardon, F. B., <i>Sacramento</i>		18	Robinson, J. H., <i>Los Angeles</i>		9
Powell, B. J., Jr., <i>Stockton</i>		23	Reasner, W. F., <i>Santa Monica</i>		9	Robinson, L. L., <i>Larkspur</i>		10
Powell, D. R., <i>Stockton</i>		23	Rebec, W. G., <i>Belmont</i>		25	Robinson, S. P., <i>Santa Barbara</i>		26
Powell, R. C., <i>Richmond</i>		3	Reckers, W. A., <i>Placerville</i>		18	Robinson, S. S., <i>Los Angeles</i>		9
Powers, A. R., <i>Tracy</i>		23	Redellings, L. H., <i>San Diego</i>		21	Roblce, W. W., <i>Riverside</i>		17
Powers, H. J., <i>Fresno</i>		9	Redewill, F. H., <i>San Francisco</i>		22	Rodenbaugh, F. H., <i>San Francisco</i>		22
Powers, R. A., <i>Palo Alto</i>		27	Reed, A. C., <i>San Francisco</i>		22	Rodin, F. H., <i>San Francisco</i>		22
Pratt, B. H., <i>Lemoore</i>		4	Reed, C. C., <i>Hynes</i>		9	Roe, J. N., <i>Riverside</i>		17
Pratt, E. D., <i>Burbank</i>		9	Reed, E. N., <i>Santa Monica</i>		9	Roen, P. B., <i>Hollywood</i>		9
Pratt, M. D., <i>Fall River Mills</i>		29	Reed, J. R., <i>Pasadena</i>		9	Roger, J. H. D., <i>San Francisco</i>		22
Pratt, O. B., <i>Los Angeles</i>		9	Reed, W. J., <i>Redlands</i>		20	Rogers, A. M., <i>Los Angeles</i>		9
Pratt, T. R., <i>Ahwahnee</i>		12	Reeng, J. D., <i>San Francisco</i>		22	Rogers, F. L., <i>Long Beach</i>		9
Premo, M. A., <i>San Jose</i>		27	Rees, C. W., <i>San Diego</i>		21	Rogers, H. S., <i>Petaluma</i>		32
Presler, H. M., <i>San Diego</i>		21	Rees, C. E., <i>San Diego</i>		21	Rogers, H., <i>Oakland</i>		1
Pressley, J. F., <i>San Francisco</i>		22	Rees, D. M., <i>Monterey Park</i>		9	Rogers, H., <i>Bakersfield</i>		7
Preston, A. W., <i>Visalia</i>		35	Rees, H. C., <i>Los Angeles</i>		9	Rogers, J. B., <i>Imola</i>		14
Preuss, C. A., <i>Santa Barbara</i>		26	Reeves, E. W., <i>Salinas</i>		13	Rogers, J. B., <i>Los Angeles</i>		9
Price, C. R., <i>Los Angeles</i>		9	Reeves, J. M., <i>Oakland</i>		1	Rogers, J. D., <i>Los Angeles</i>		9
Price, J. B. M., <i>Orange</i>		15	Reeves, J. W., <i>Los Angeles</i>		9	Rogers, L. B., <i>Los Angeles</i>		9
Prien, R. H., <i>Gilroy</i>		27	Reeves, W. R., <i>Salinas</i>		13	Rogers, L. E., <i>Los Angeles</i>		9
Priestley, S. F., <i>Stockton</i>		23	Regan, L. J., <i>Hollywood</i>		9	Rogers, S., <i>Tulare</i>		35
Priestley, W. F., <i>Oakland</i>		1	Rehfsch, J. M., <i>San Francisco</i>		22	Rogers, T. L., <i>Long Beach</i>		9
Primasing, R. J., <i>Courtland</i>		18	Reich, W. W., <i>Berkeley</i>		1	Rogers, W. L., <i>San Francisco</i>		22
Prince, L. D., <i>San Francisco</i>		22	Reiche, C., <i>Los Angeles</i>		9	Rohlfes, B. J., <i>San Francisco</i>		22
Prince, R. W., <i>San Bernardino</i>		20	Reichle, P. A., <i>Hollywood</i>		22	Rohlfing, R. F., <i>Hawthorne</i>		9
Prindle, K. H., <i>San Mateo</i>		25	Reid, R. S., <i>Oceanside</i>		21	Rohrbacher, G. H., <i>Stockton</i>		23
Pritchard, F. H., <i>Colton</i>		20	Reilly, P. H., <i>Vallejo</i>		31	Roller, C. S., <i>Colusa</i>		38
Pritchard, J. L., <i>San Jose</i>		27	Reilly, W., <i>San Francisco</i>		22	Rolph, W. D., <i>National City</i>		21
Pritchard, W. F., <i>San Bernardino</i>		20	Reilly, W. A., <i>San Francisco</i>		22	Roncoviari, A., <i>San Francisco</i>		22
Probasco, H. G., <i>Los Angeles</i>		9	Reina, S., <i>Los Angeles</i>		9	Rood, V. V., <i>Grass Valley</i>		16
Procscher, F., <i>San Jose</i>		27	Reinard, L., <i>Los Angeles</i>		9	Rook, C. W., <i>Montrose</i>		9
Profant, H. J., <i>Santa Barbara</i>		26	Reinertsen, B. R., <i>Los Angeles</i>		9	Roome, C. T., <i>Santa Barbara</i>		26
Proudfoot, C. P., <i>San Luis Obispo</i>		24	Reinle, G. G., <i>Oakland</i>		1	Rooney, C. E., <i>Santa Monica</i>		9
Pruett, H. J., <i>San Francisco</i>		22	Reinstein, A. H., <i>San Francisco</i>		22	Rooney, H. M., <i>Los Angeles</i>		9
Pruett, J. F., <i>San Francisco</i>		22	Reis, A. G. DeS., <i>Oakland</i>		1	Roos, A. R., <i>Loma Linda</i>		20
Pruett, W. C., <i>Oakland</i>		1	Reische, A. E., <i>Oakland</i>		1	Roos, D. D., <i>Corona</i>		17
Pryor, H. B., <i>San Francisco</i>		27	Reiser, S. M., <i>Los Angeles</i>		9	Root, P. N., <i>Bakersfield</i>		7
Pulford, D. S., <i>Sacramento</i>		38	Reiss, O., <i>Los Angeles</i>		9	Root, R. R., <i>Corona</i>		17
Purcell, R., <i>Los Angeles</i>		9	Reiswig, A. H., <i>Loma Linda</i>		20	Rosanoff, A. J., <i>Los Angeles</i>		9
Purlenky, G. P., <i>Arcata</i>		5	Reitzel, R. J., <i>Burlingame</i>		25	Rosasco, O. L., <i>Saratoga</i>		27
Pursell, F. J., <i>Los Angeles</i>		9	Remaly, C. E., <i>Los Angeles</i>		9	Rosburg, A. H., <i>San Francisco</i>		22
Putnam, H. A., <i>Monrovia</i>		9	Remington, L. D., <i>Monrovia</i>		9	Roscoe, A. M., <i>Newman</i>		33
Q			Remmel, A. J., <i>San Francisco</i>		22	Rose, C. M., <i>Los Angeles</i>		9
Quaintance, P. A., <i>Los Angeles</i>		9	Remmen, E. T., <i>Glendale</i>		9	Rose, H. de W., <i>Sonora</i>		36
Queirolo, C. A., <i>Oakland</i>		1	Renz, C., <i>San Francisco</i>		22	Rose, J. T., <i>Healdsburg</i>		32
Quimby, S. A., <i>Madera</i>		4	Ress, I. L., <i>Los Angeles</i>		9	Rose, L. M., <i>Santa Clara</i>		27
Quinan, C., <i>San Francisco</i>		22	Rethwilm, L. A., <i>San Francisco</i>		22	Rosenberger, H. G., <i>Whittier</i>		9
Quinlan, C. M., <i>San Francisco</i>		22	Reud, W. R., <i>Oakland</i>		1	Rosenblum, D. H., <i>Los Angeles</i>		9
Quinlan, J. F., <i>San Francisco</i>		22	Rey, H. F., <i>Ornard</i>		37	Rosenblum, H. H., <i>San Francisco</i>		22
Quinn, T. D.A., <i>San Francisco</i>		22	Reynolds, C. E., <i>Los Angeles</i>		9	Rosencrantz, E., <i>San Francisco</i>		22
Quinn, V. J., <i>Los Angeles</i>		9	Reynolds, H. C., <i>Arlington</i>		17	Rosenfeld, M. H., <i>Los Angeles</i>		9
Quinn, W., <i>San Francisco</i>		22	Reynolds, L. R., <i>San Francisco</i>		22	Rosenkranz, H. A., <i>Los Angeles</i>		9
Quinn, W. J., <i>Eureka</i>		5	Reynolds, L. G., <i>Los Angeles</i>		9	Rosenthal, A. G., <i>San Francisco</i>		22
Quinn, W. R., <i>Blue Springs, Mo.</i>		9	Reynolds, P. A., <i>Los Angeles</i>		9	Ross, A., <i>Los Angeles</i>		9
Quint, S. J., <i>Los Angeles</i>		9	Reynolds, R. A., <i>San Francisco</i>		22	Ross, D. E., <i>Los Angeles</i>		9
R			Reynolds, R. G. Jr., <i>Palo Alto</i>		27	Ross, J. C., <i>Los Angeles</i>		9
Rabinowitz, R., <i>San Francisco</i>		22	Reynolds, R. W., <i>Pasadena</i>		9	Ross, K. F., <i>Los Angeles</i>		9
Rabwin, M. H., <i>Los Angeles</i>		9	Reynolds, T. E., <i>Oakland</i>		1	Ross, M. A., <i>Los Angeles</i>		9
Radford, E. B., <i>Weimar</i>		16	Rhodes, F. A., <i>Culver City</i>		9	Ross, M. H., <i>Los Angeles</i>		9
Raffetto, J. J., <i>San Francisco</i>		22	Rhodes, G. C., <i>San Francisco</i>		22	Ross, W. H., <i>Brightwater, N. Y.</i>		21
Ragan, S. T., <i>Hollywood</i>		9	Riach, M. T., <i>San Diego</i>		21	Rosson, C. T., <i>Hanford</i>		4
Railsback, O. C., <i>Woodland</i>		38	Rice, C. H., <i>Oakland</i>		1	Rosson, R. W., <i>Tulare</i>		35
Raitt, G. E., <i>Santa Ana</i>		15	Ricc, F. M., <i>San Francisco</i>		22	Roth, E. F., <i>Palo Alto</i>		27
			Rich, T. C., <i>Los Angeles</i>		9	Roth, G. H., <i>Los Angeles</i>		9
			Richards, C. M., <i>San Jose</i>		27	Rothman, P. E., <i>Los Angeles</i>		9

NAME	COUNTY	SOCIETY NO.	NAME	COUNTY	SOCIETY NO.	NAME	COUNTY	SOCIETY NO.
Rothschild, M., <i>San Francisco</i>		22	Schenck, G. F., <i>Los Angeles</i>		9	Shannon, J. M., <i>Berkeley</i>		1
Rothwell, W. T., <i>Los Angeles</i>		9	Scherfee, J. F., <i>Los Angeles</i>		9	Sharp, J. G., <i>San Francisco</i>		22
Rover, H. P., <i>Los Angeles</i>		9	Schiffbauer, H. E., <i>Los Angeles</i>		9	Sharp, R. G., <i>San Diego</i>		21
Rowe, A. H., <i>Oakland</i>		1	Schiller, M. M., <i>Los Angeles</i>		9	Sharpe, O. A., <i>San Francisco</i>		25
Rowe, C. H., <i>Oakland</i>		1	Schilling, W., <i>San Francisco</i>		22	Sharpsteen, J. R., <i>Oakland</i>		1
Rowe, M. J., <i>Norwalk</i>		9	Schiro, S., <i>San Francisco</i>		22	Shattinger, C., <i>Los Altos</i>		27
Rowell, H. N., <i>Berkeley</i>		1	Schlageter, H. J., <i>San Francisco</i>		22	Shattuck, W. E., <i>Hollywood</i>		9
Rowell, W. A., <i>Crockett</i>		3	Schlappi, J. C., <i>San Diego</i>		21	Shattuck, H. P., <i>Los Angeles</i>		9
Royer, J. E., <i>Oakland</i>		1	Schlotthauer, H. L., <i>Bakersfield</i>		7	Shaw, E. B., <i>San Francisco</i>		22
Royston, E. A., <i>Los Angeles</i>		9	Schlotthauer, M. Q., <i>Bakersfield</i>		7	Shaw, H. N., <i>Los Angeles</i>		9
Rubenstein, I., <i>Los Angeles</i>		9	Schluter, H. F., <i>Sacramento</i>		18	Shea, J. J., <i>San Diego</i>		21
Rubin, J. S., <i>Los Angeles</i>		9	Schmelz, C. J., <i>Gacneville</i>		32	Shea, T. T., <i>San Francisco</i>		22
Ruddock, J. C., <i>Los Angeles</i>		9	Schmidt, A. E., <i>San Francisco</i>		22	Shea, W. E., <i>San Francisco</i>		22
Ruddy, L. W., <i>Sacramento</i>		18	Schmidt, D. A., <i>Los Angeles</i>		9	Sheafe, E. V., <i>Oakland</i>		1
Rude, A. E., <i>Los Angeles</i>		9	Schmidt, E. J., <i>Fresno</i>		4	Sheehy, F. T., <i>San Francisco</i>		22
Rue, H. A., <i>Los Angeles</i>		9	Schmidt, P. E., <i>Glendale</i>		9	Sheets, O. B., <i>Los Angeles</i>		9
Ruediger, E. H., <i>San Diego</i>		21	Schmitt, E. O. G., <i>San Jose</i>		27	Shelby, D. C., <i>Los Angeles</i>		9
Ruediger, G. F., <i>Pasadena</i>		9	Schmitt, H. H., <i>Gilroy</i>		27	Sheldon, E. C., <i>Hollister</i>		19
Rueter, K., <i>Oakland</i>		1	Schmitt, L. S., <i>San Francisco</i>		22	Sheldon, E. F., <i>Los Angeles</i>		2
Ruff, F. R., <i>Fresno</i>		4	Schmoele, J. M., <i>Los Angeles</i>		9	Sheldon, E. A., <i>Bellflower</i>		9
Ruggles, H. E., <i>San Francisco</i>		22	Schneider, E. H., <i>Los Angeles</i>		9	Sheldon, F. B., <i>Stockton</i>		23
Rullison, E. T., <i>Sacramento</i>		18	Schoff, C. E., <i>Sacramento</i>		18	Sheller, W. O., <i>Culver City</i>		9
Rumph, P. E., <i>Orange</i>		15	Schofield, R. O., <i>Hobart Mills</i>		16	Shelton, E. K., <i>Santa Barbara</i>		26
Runwell, M. E., <i>San Francisco</i>		22	Scholl, A. J., <i>Los Angeles</i>		9	Shelton, G. C., <i>Los Angeles</i>		9
Runkel, G. H., <i>McCloud</i>		30	Scholtz, M., <i>Los Angeles</i>		9	Shenck, F. P., <i>Santa Cruz</i>		28
Runner, J. F., <i>San Francisco</i>		22	Scholz, A. M., <i>Los Angeles</i>		9	Shepard, C. E., <i>Standard University</i>		27
Rupert, R. R., <i>Oakland</i>		1	Schoonmaker, G. D., <i>San Francisco</i>		22	Shepard, W. P., <i>San Francisco</i>		22
Rusche, C. F., <i>Hollywood</i>		9	Schoot, H. J., <i>Los Angeles</i>		9	Shepardson, D. E., <i>San Francisco</i>		22
Rush, R. C., <i>San Fernando</i>		9	Schottstaedt, W. E. R., <i>Fresno</i>		4	Shepardson, H. C., <i>San Francisco</i>		22
Russell, E. L., <i>Santa Ana</i>		15	Schreiber, F. C., <i>San Francisco</i>		22	Shepherd, J. H., <i>San Jose</i>		27
Russell, J. A., <i>Auburn</i>		16	Schreiber, L. W., <i>Santa Monica</i>		9	Shepherd, H. L., <i>Los Angeles</i>		9
Russell, R., <i>Glendale</i>		9	Schroeder, F. B., <i>San Diego</i>		21	Sherman, B. H., <i>Hollywood</i>		9
Russell, T. G., <i>San Francisco</i>		22	Schroeder, L. A., <i>Los Angeles</i>		9	Sherman, J., <i>San Francisco</i>		22
Russell, W. W., <i>San Diego</i>		21	Schuetz, C. E., <i>Hollywood</i>		9	Sherman, R. S., <i>San Francisco</i>		22
Ruth, E. S., <i>Hollywood</i>		9	Schulman, L. M., <i>Hollywood</i>		9	Sherrard, E. E., <i>Los Angeles</i>		9
Ryan, A. F., <i>Los Angeles</i>		9	Schultz, C. E., <i>Glendale</i>		9	Sherrick, J. W., <i>Oakland</i>		1
Ryan, A. J., <i>Vallejo</i>		31	Schultz, H. H., <i>San Francisco</i>		22	Sherril, J. W., <i>La Jolla</i>		21
Ryan, C. D., <i>Beverly Hills</i>		9	Schultz, LeR. O., <i>Glendale</i>		9	Sherry, L. B., <i>Pasadena</i>		9
Ryan, F. S., <i>San Jose</i>		27	Schulz, R. L., <i>Los Angeles</i>		9	Sherwood, O. W., <i>Westport</i>		11
Ryan, L. R., <i>Santa Barbara</i>		26	Schulze, M., <i>San Francisco</i>		22	Schickle, C., <i>Los Angeles</i>		9
Ryan, R. C., <i>San Francisco</i>		22	Schumacher, I. C., <i>San Francisco</i>		22	Shidler, G. P., <i>Torrance</i>		9
Ryan, W. J., <i>San Diego</i>		21	Schurmeier, H. L., <i>Santa Barbara</i>		26	Shields, L., <i>Oakland</i>		1
Ryder, B. E., <i>Los Angeles</i>		9	Schurter, M. A., <i>Long Beach</i>		9	Shiels, G. F., <i>Redwood City</i>		25
Ryfkogel, H. A. L., <i>San Francisco</i>		22	Schussler, H., Jr., <i>San Francisco</i>		22	Shier, C. W., <i>Arcadia</i>		9
Rypins, R. F., <i>San Francisco</i>		22	Schwalenberg, H. R., <i>Santa Barbara</i>		26	Shilling, J. W., <i>Los Angeles</i>		9
S			Schwartz, A. H., <i>Los Angeles</i>		9	Shiple, R. E., <i>Los Angeles</i>		9
Sabichi, G. C., <i>Whittier</i>		9	Schwartz, F. L., <i>San Diego</i>		21	Shiple, W. C., <i>Santa Rosa</i>		32
Safarik, E. S., <i>Los Angeles</i>		9	Schwartzman, H., <i>Oakland</i>		1	Shipman, O. F., <i>Los Angeles</i>		9
Saier, M. H., <i>Palo Alto</i>		27	Schwarz, J., <i>San Francisco</i>		22	Shipman, S. J., <i>San Francisco</i>		22
Sale, J. J., <i>San Francisco</i>		22	Schwarz, T. E., <i>Oakland</i>		1	Shippey, R. H., <i>Long Beach</i>		9
Salisbury, C. S., <i>Los Angeles</i>		9	Schwuchow, W. B., <i>Los Angeles</i>		9	Shirey, C. W., <i>North Hollywood</i>		9
Salomon, E., <i>San Francisco</i>		22	Sciaroni, G. H., <i>Fresno</i>		4	Shirk, F. M., <i>La Verne</i>		9
Salter, N. M., <i>Williams</i>		38	Scobee, J. E., <i>Los Angeles</i>		9	Shively, E. M., <i>Ventura</i>		37
Salvin, M., <i>Los Angeles</i>		9	Scoins, W. H., <i>Los Angeles</i>		9	Shoemaker, H., <i>Los Angeles</i>		9
Sample, T. N., <i>Fresno</i>		4	Scott, A. J., Jr., <i>Los Angeles</i>		9	Shook, F. M., <i>Oakland</i>		1
Sampson, J. J., <i>San Francisco</i>		22	Scott, J. W., <i>Colusa</i>		38	Shore, F. A., <i>Ventura</i>		37
Sampson, J. P., <i>Santa Monica</i>		9	Scott, W. E., <i>San Francisco</i>		22	Shorkley, T. M., <i>Carpinteria</i>		26
Sampson, J. A., <i>Sacramento</i>		18	Scovel, R. E., <i>San Francisco</i>		22	Shotwell, C. L., <i>Los Angeles</i>		9
Sampson, M. H., <i>Berkeley</i>		1	Scribner, R. G., <i>Sacramento</i>		18	Shreck, J. A., <i>Redlands</i>		20
Sampson, W. A., <i>San Francisco</i>		22	Scroggy, J. Q. A., <i>Hollywood</i>		9	Shryock, A., <i>Loma Linda</i>		20
Sanders, R. W., <i>Alameda</i>		1	Scudder, J. H., <i>Oakland</i>		1	Shuck, C. H., <i>Fresno</i>		4
Sanderson, G. H., <i>Stockton</i>		23	Scudder, R., <i>Fort Bragg</i>		11	Shufelt, A. A., <i>San Jose</i>		27
Sandholt, J. P., <i>Monterey</i>		13	Seabolt, G. C., <i>South Pasadena</i>		9	Shulman, L., <i>Los Angeles</i>		9
Sandie, J., <i>Los Angeles</i>		9	Seals, P. W., <i>Los Angeles</i>		9	Shultz, E. L., <i>Los Angeles</i>		9
Sands, R. A., <i>Ocean Park</i>		9	Searls, H. H., <i>San Francisco</i>		22	Shumaker, E. K., <i>Los Angeles</i>		9
Sands, R. L., <i>Santa Monica</i>		9	Seaver, H. C., <i>Los Angeles</i>		9	Shuman, J. W., <i>Los Angeles</i>		9
Sanford, J. R., <i>Pasadena</i>		9	Seavey, M. A., <i>Sacramento</i>		18	Shuman, J. R., <i>Los Angeles</i>		9
Sanford, P., <i>San Jose</i>		27	Seawell, J. W., <i>Heldsburg</i>		32	Shumate, F. O., <i>San Francisco</i>		22
Sansum, W. D., <i>Santa Barbara</i>		26	Sebastian, C. F., <i>Los Angeles</i>		9	Shumate, T. E., <i>San Francisco</i>		22
Sappington, E. E., <i>San Francisco</i>		22	Sedgwick, V. de M., <i>Long Beach</i>		9	Shutes, M. H., <i>Oakland</i>		1
Sargent, W. B., <i>San Francisco</i>		22	Seeburt, E. M. P., <i>San Francisco</i>		22	Siebe, E. V., <i>San Francisco</i>		22
Sargent, W. H., <i>Oakland</i>		1	Seech, S. G., <i>Los Angeles</i>		9	Siebert, A. A., <i>Oakland</i>		1
Sartori, H. J., <i>San Francisco</i>		22	Seeley, L. J., <i>Fort Jones</i>		30	Siefert, A. C., <i>Oakland</i>		1
Sasso, J. A., <i>Los Angeles</i>		9	Segall, G., <i>Los Angeles</i>		9	Siegmund, F. W., <i>Los Angeles</i>		9
Sauer, F. J., <i>Los Angeles</i>		9	Seiberth, J., <i>Pirley</i>		35	Sigworth, D. C., <i>Long Beach</i>		9
Sauer, F. K., <i>Los Angeles</i>		9	Seid, M. J., <i>San Francisco</i>		22	Silverman, D. J., <i>Los Angeles</i>		9
Saulsberry, C. E., <i>New Brunswick,</i>			Seiger, H. W., <i>Needles</i>		20	Silverthorn, F. R., <i>Los Angeles</i>		9
<i>New Jersey</i>		15	Seitz, R. P., <i>San Francisco</i>		22	Simon, E. G., <i>Oakland</i>		1
Saunders, C. E., <i>San Jose</i>		27	Seletz, R., <i>Los Angeles</i>		9	Simon, M. E., <i>San Francisco</i>		22
Savage, J. C., <i>Los Angeles</i>		9	Selfridge, G., <i>San Francisco</i>		22	Simonds, P. E., <i>Riverside</i>		17
Savage, P. M., <i>San Bernardino</i>		20	Seligman, L. L., <i>Dinuba</i>		27	Simpson, B. R., <i>San Diego</i>		21
Savage, S. H., <i>Lancaster</i>		9	Seligman, L. J., <i>Los Angeles</i>		9	Simpson, J. A., <i>San Francisco</i>		22
Savage, W. W., <i>San Bernardino</i>		20	Sellery, A. C., <i>Long Beach</i>		9	Singer, H., <i>Los Angeles</i>		9
Saverien, A. E., <i>Los Angeles</i>		9	Sellery, C. M., <i>Los Angeles</i>		9	Sink, W. D., <i>Santa Maria</i>		26
Saylin, G. J., <i>Los Angeles</i>		9	Sellew, P. K., <i>Los Angeles</i>		9	Sippy, J. J., <i>Stockton</i>		23
Saylin, J., <i>Venice</i>		9	Sellon, G. I., <i>Fullerton</i>		15	Sirbu, A. B., <i>San Francisco</i>		22
Saylor, B. F., <i>Redding</i>		29	Serns, A. E., <i>Santa Barbara</i>		26	Sirmay, E. A., <i>Los Angeles</i>		9
Scamell, J. W., <i>Oakland</i>		1	Servin, C., <i>Los Angeles</i>		9	Sisson, C. E., <i>San Diego</i>		21
Scanland, J. M., <i>Agnew</i>		27	Settle, F. B., <i>Long Beach</i>		9	Sisson, M., <i>Oakland</i>		1
Scanlon, W. G., <i>Pasadena</i>		9	Setzler, G. B., <i>Los Angeles</i>		9	Skaff, J. E., <i>San Francisco</i>		22
Scarboro, E. R., <i>Fresno</i>		4	Sevenman, G. W., <i>San Mateo</i>		25	Skeel, D. W., <i>Los Angeles</i>		22
Scarborough, R. A., <i>San Francisco</i>		22	Sevier, E., <i>Sacramento</i>		18	Skillen, J., <i>Olive View</i>		9
Scatena, F. N., <i>Sacramento</i>		18	Sevall, E. C., <i>San Francisco</i>		22	Skilling, L. E., <i>Alameda</i>		1
Schaefer, J. W., <i>Los Angeles</i>		9	Sexton, C. L., <i>Los Angeles</i>		9	Slaughter, H. C., <i>Los Angeles</i>		9
Schaeffer, R. W., <i>Redondo Beach</i>		9	Seymour, E. C., <i>Olive View</i>		9	Slavich, J. F., <i>Oakland</i>		1
Schaller, W. F., <i>San Francisco</i>		22	Seymour, J. H., <i>Los Angeles</i>		9	Sleeper, K. R., <i>Los Angeles</i>		9
Shallig, D. W., <i>Sacramento</i>		18	Shackford, B. C., <i>Long Beach</i>		9	Slemons, J. M., <i>Los Angeles</i>		9
Shaper, E. A., <i>Keele</i>		7	Shade, M. A., <i>Oakland</i>		1	Sloan, L. E., <i>Inglewood</i>		9
Schaupp, K. L., <i>San Francisco</i>		22	Shafer, F. P., <i>Los Angeles</i>		9	Sloan, L. N., <i>Yuba City</i>		39
Scheffick, J. F., <i>Los Angeles</i>		9	Shafor, H. A., <i>Los Angeles</i>		9	Sloan, O. J., <i>Glendale</i>		9
Scheier, R. B., <i>San Francisco</i>		22	Shahovitch, G. P., <i>Los Angeles</i>		9	Sloane, L. O., <i>Los Angeles</i>		9
Schell, J. P., <i>San Jose</i>		27	Shambaugh, N. F., <i>Long Beach</i>		9	Smale, G. A., <i>Los Angeles</i>		9
			Shank, C. E., <i>Corona</i>		17	Small, C. K., <i>Oakland</i>		1
			Shanks, F. H., <i>San Francisco</i>		22	Smalley, R. B., <i>Willits</i>		11

NAME	COUNTY	COUNTY SOCIETY NO.	NAME	COUNTY	COUNTY SOCIETY NO.	NAME	COUNTY	COUNTY SOCIETY NO.
Smallwood, W. C., <i>Long Beach</i>		9	Staatz, A. D., <i>Olive View</i>		9	Sturges, R. R. L., <i>Los Angeles</i>		9
Smart, E. P., <i>Olive View</i>		9	Stabel, F., <i>Redding</i>		29	Styan, W. E., <i>San Francisco</i>		22
Smiley, H. W., <i>Indio</i>		17	Stabel, J. A., <i>Sacramento</i>		18	Sudlow, E. L., <i>San Fernando</i>		9
Smiley, K. E., <i>Los Angeles</i>		9	Stadfield, C. G., <i>Hollywood</i>		9	Suehs, P. E., <i>San Francisco</i>		22
Smiley, R. S., <i>San Diego</i>		21	Stadlinger, K. P., <i>Burbank</i>		9	Sugar, H., <i>Los Angeles</i>		9
Smitten, P. H., <i>Los Angeles</i>		9	Stadtherr, E. F., <i>San Francisco</i>		22	Sullivan, C. S., <i>San Jose</i>		27
Smith, A. S. J., <i>San Jose</i>		27	Stadtmuller, E. S., <i>San Francisco</i>		22	Sullivan, J. J., <i>Oakland</i>		1
Smith, A. B., <i>La Jolla</i>		21	Stafford, D. D., <i>Alameda</i>		1	Sullivan, J. M., <i>San Francisco</i>		22
Smith, A. E., <i>Los Angeles</i>		9	Stafford, H. E., <i>Oakland</i>		1	Sullivan, N. R., <i>Santa Cruz</i>		28
Smith, A. M., <i>Oakland</i>		1	Stafford, O. R., <i>Los Angeles</i>		9	Sullivan, W. J., <i>Hollywood</i>		9
Smith, B., <i>Los Angeles</i>		9	Stahl, W. F., <i>Los Angeles</i>		9	Sulzbacher, C. I., <i>Los Angeles</i>		9
Smith, C. L., <i>Maywood</i>		9	Staley, H. D., <i>Beverly Hills</i>		9	Sumerlin, H. S., <i>San Diego</i>		21
Smith, C. E., <i>San Francisco</i>		22	Stanford, K. J., <i>Fresno</i>		4	Sundberg, R. H., <i>San Diego</i>		21
Smith, D. V., <i>Long Beach</i>		9	Stanley, L. L., <i>San Rafael</i>		10	Sundin, P. O., <i>Los Angeles</i>		9
Smith, D. A., <i>Oakland</i>		1	Stanton, F. E., <i>Long Beach</i>		9	Sunzer, A. T., <i>San Jose</i>		27
Smith, E. D., <i>Santa Barbara</i>		26	Stanton, R. H., <i>Pasadena</i>		9	Surryhne, B. F., <i>Modesto</i>		33
Smith, E. G., <i>Oakland</i>		1	Starbird, G. A., <i>King City</i>		13	Suski, P. M., <i>Los Angeles</i>		9
Smith, E. W., <i>San Francisco</i>		22	Stark, B. W., <i>San Francisco</i>		22	Susnow, D. A., <i>San Francisco</i>		22
Smith, F. H., <i>San Bruno</i>		25	Stark, J. H., <i>Oakland</i>		1	Sutherland, H. M., <i>Berkeley</i>		1
Smith, G. F., <i>Los Angeles</i>		9	Stark, M., <i>Los Angeles</i>		9	Sutherland, K. H., <i>Santa Ana</i>		15
Smith, H. L., <i>Fair Oaks</i>		18	Starks, D. J., <i>San Francisco</i>		22	Sutherland, P. R., <i>Los Angeles</i>		9
Smith, H. H., <i>Los Angeles</i>		9	Starr, R. W., <i>Los Angeles</i>		9	Sutherland, R. T., <i>Oakland</i>		1
Smith, H. A., <i>Whittier</i>		9	Staub, J. S., <i>San Jose</i>		27	Sutherlin, C. G., <i>Los Angeles</i>		9
Smith, H. J., <i>Oakland</i>		1	Stauffer, M. L., <i>Pittsburg</i>		3	Sutton, T. L., <i>Stockton</i>		23
Smith, H., <i>Los Angeles</i>		9	St. Clair, R., <i>Oakland</i>		1	Svoboda, F. C., <i>San Diego</i>		21
Smith, H. Mae V., <i>Santa Ana</i>		15	Steady, C. L., <i>San Diego</i>		21	Swanson, C. F., <i>Los Angeles</i>		9
Smith, H. G., <i>San Francisco</i>		22	Steddom, F. W., <i>Los Angeles</i>		9	Swartz, R. E., <i>San Francisco</i>		25
Smith, J. J., <i>San Francisco</i>		22	Steele, A. A., <i>Los Angeles</i>		9	Swager, L. S., <i>Oakland</i>		1
Smith, J. L., <i>Los Angeles</i>		9	Steele, A. B., <i>Santa Barbara</i>		26	Swearingen, F. C., <i>Pomona</i>		9
Smith, J. K., <i>Bakersfield</i>		7	Steele, E. H., <i>Los Angeles</i>		9	Sweeney, A. H., <i>Fresno</i>		4
Smith, K. B., <i>Oakland</i>		1	Steele, J. T., <i>Dunsmuir</i>		30	Sweeney, J. P., <i>Millbrae</i>		25
Smith, L. A., <i>San Francisco</i>		22	Steele, M. T., <i>Los Angeles</i>		9	Sweet, C. D., <i>Oakland</i>		1
Smith, L. W., <i>Los Angeles</i>		9	Steen, C. E., <i>Brea</i>		15	Sweet, E., <i>Los Angeles</i>		9
Smith, L. E., <i>Hollister</i>		19	Steen, E. J., <i>Fullerton</i>		15	Sweet, R. B., <i>Long Beach</i>		9
Smith, L. E., <i>San Bernardino</i>		20	Steffy, J. L., <i>Santa Monica</i>		9	Sweetser, G. W., <i>Martinez</i>		3
Smith, M. H., <i>Hollywood</i>		9	Stegeman, W., <i>Crescent City</i>		5	Swenson, A. W., <i>Van Nuys</i>		9
Smith, M., <i>Los Angeles</i>		9	Stein, J. L., <i>Oakland</i>		1	Swenson, R. T., <i>Los Angeles</i>		9
Smith, N. R., <i>Monterey Park</i>		9	Stein, W. F., <i>Fresno</i>		4	Swett, W. F., <i>San Francisco</i>		22
Smith, R. M., <i>Riverside</i>		17	Steinberg, J., <i>Los Angeles</i>		9	Swezey, S., <i>Los Angeles</i>		9
Smith, R. T., <i>Pomona</i>		9	Steinmetz, A. F., <i>Hayward</i>		1	Swigart, M., <i>Monterey</i>		13
Smith, R., <i>Los Angeles</i>		9	Stephens, B. P., <i>Oakland</i>		1	Swim, W. A., <i>Los Angeles</i>		9
Smith, R. K., <i>San Francisco</i>		22	Stephens, B. M., <i>Alameda</i>		1	Swindt, J. K., <i>Pomona</i>		9
Smith, R. D., <i>Pomona</i>		9	Stephens, H. W., <i>San Francisco</i>		22	Swinney, R. W., <i>Long Beach</i>		9
Smith, R. C., <i>Hollywood</i>		9	Stephens, J. S., <i>Los Angeles</i>		9	Syer, W. H., <i>Los Angeles</i>		9
Smith, R. L., <i>Pomona</i>		9	Stephens, P. H., <i>Los Angeles</i>		9	Sylvester, F. M., <i>Oakland</i>		1
Smith, R. L., <i>Pasadena</i>		9	Stephens, W. C., <i>Pasadena</i>		9	Syman, L. W., <i>Los Angeles</i>		9
Smith, R. N., <i>Hollywood</i>		9	Stephens, W. B., <i>Alameda</i>		1	Symonds, C. W., <i>Pasadena</i>		9
Smith, R. D., <i>San Pedro</i>		9	Stephenson, H. A., <i>San Francisco</i>		22	Szukalski, J. P., <i>Pasadena</i>		9
Smith, S., <i>Pasadena</i>		9	Stern, A. A., <i>Sacramento</i>		18			
Smith, S. K., <i>Oakland</i>		1	Stevens, C. S., <i>Santa Barbara</i>		26			
Smith, W. B., <i>Los Angeles</i>		9	Stevens, G. M., <i>Los Angeles</i>		9			
Smith, W. B., <i>San Francisco</i>		22	Stevens, J. B., <i>Los Angeles</i>		9			
Smith, W., <i>Los Angeles</i>		1	Stevens, W. L., <i>Baldwin Park</i>		9			
Smith, W. B., <i>Delano</i>		7	Stevens, W. E., <i>San Francisco</i>		22			
Smithers, J. A., <i>Tracy</i>		23	Stevenson, A. P., <i>Torrance</i>		9			
Smithies, H. R., <i>Alameda</i>		1	Stevenson, G. L., <i>Sacramento</i>		18			
Smolt, C. A., <i>Ventura</i>		37	Stevenson, G. R., <i>San Diego</i>		21			
Smolt, L. P., <i>Ventura</i>		37	Stevenson, S. L., <i>San Francisco</i>		22			
Smylie, R. S., <i>San Diego</i>		21	Stewart, A. E., <i>Los Angeles</i>		9			
Smyth, F. S., <i>San Francisco</i>		22	Stewart, C. W., <i>Hollywood</i>		9			
Smyth, M. H., <i>Stockton</i>		23	Stewart, H. B., <i>Ripon</i>		33			
Smythe, H., <i>Stockton</i>		23	Stewart, H. J., <i>San Diego</i>		21			
Snedden, C. M., <i>Long Beach</i>		9	St. Geme, J. W., <i>Los Angeles</i>		9			
Snoddy, C. A., <i>Vallejo</i>		31	Stibbens, F. H., <i>Oakland</i>		1			
Snow, W. F., <i>New York, N. Y.</i>		27	Stice, T. H., <i>Imola</i>		14			
Snure, H., <i>Los Angeles</i>		9	Stiles, F. E., <i>San Francisco</i>		22			
Snyder, C. C., <i>Pasadena</i>		9	Stilson, G. D., <i>Long Beach</i>		9			
Snyder, G. A., <i>W. Los Angeles</i>		9	Stirewalt, H. W., <i>Concord</i>		3			
Snyder, G. S., <i>San Francisco</i>		22	Stivers, C. G., <i>Los Angeles</i>		9			
Sobey, G. L., <i>Paso Robles</i>		24	Stoddard, C. L., <i>San Diego</i>		21			
Sogemeier, E., <i>San Mateo</i>		25	Stoddard, J. McC., <i>Beverly Hills</i>		9			
Sohler, F. E., <i>Healdsburg</i>		32	Stoddard, T. A., <i>San Francisco</i>		22			
Solland, A., <i>Los Angeles</i>		9	Stolle, F., <i>Dixon</i>		31			
Solomon, J. C., <i>Los Angeles</i>		9	Stolz, C. E., <i>Los Angeles</i>		9			
Somerfield, E., <i>Los Angeles</i>		9	Stolz, H. R., <i>Berkeley</i>		1			
Somerfield, H. A., <i>San Francisco</i>		22	Stone, B., <i>San Francisco</i>		22			
Sonnenberg, A., <i>San Francisco</i>		22	Stone, R. S., <i>San Francisco</i>		22			
Sooy, D. W., <i>San Francisco</i>		22	Stone, W. J., <i>Pasadena</i>		9			
Sooy, J. W., <i>San Francisco</i>		22	Stoops, R. P., <i>Oakland</i>		1			
Soper, H. V., <i>Los Angeles</i>		9	Storey, T. A., <i>Stanford University</i>		27			
Sorsen, A. A., <i>Los Angeles</i>		9	Stork, V. E., <i>Los Angeles</i>		9			
Sosnowski, K. C., <i>Long Beach</i>		9	Stoughton, A. V., <i>Claremont</i>		9			
Soto-Hall, R., <i>San Francisco</i>		22	Stovall, L., <i>Los Angeles</i>		9			
Soutar, R. G., <i>Sacramento</i>		18	Stowe, O. P., <i>Oakland</i>		1			
Spalding, A. B., <i>San Francisco</i>		22	Stowell, J. M., <i>San Francisco</i>		22			
Spalding, C. H., <i>Richmond</i>		3	Strahlmann, L., <i>San Diego</i>		21			
Spalding, J. B., <i>Richmond</i>		3	Strang, T. A., <i>Long Beach</i>		9			
Spalding, R. B., <i>San Francisco</i>		22	Strange, S. P., <i>San Francisco</i>		22			
Spaulding, A. Q., <i>Santa Barbara</i>		26	Strathern, H. J., <i>Hollywood</i>		9			
Spaulding, J. M., <i>Los Angeles</i>		9	Stratton, E. K., <i>San Francisco</i>		22			
Spear, E. B., <i>Los Angeles</i>		9	Stratton, G. W., <i>Marysville</i>		39			
Spear, J. L., <i>Santa Rosa</i>		32	Stratton, J. M., <i>Berkeley</i>		1			
Speer, G. G., <i>Los Angeles</i>		9	Street, L. A. B., <i>Los Angeles</i>		9			
Speik, F. A., <i>Los Angeles</i>		9	Strickler, D., <i>San Francisco</i>		22			
Spencer, G. A., <i>Sacramento</i>		18	Strickler, J. P., <i>San Francisco</i>		22			
Spencer, R. M., <i>Los Angeles</i>		9	Strietmann, W. H., <i>Oakland</i>		1			
Sperling, S. N., <i>Los Angeles</i>		9	Strong, A., <i>Santa Paula</i>		37			
Sperry, J. A., <i>San Francisco</i>		22	Strong, D. C., <i>Upper Lake</i>		11			
Spiers, H. W., <i>Los Angeles</i>		9	Strong, F. X., <i>Oakland</i>		1			
Spiro, H., <i>San Francisco</i>		22	Strongin, S., <i>Bakersfield</i>		7			
Sprague, F. M., <i>Fresno</i>		4	Struble, H. P., <i>Hayward</i>		1			
Sprague, G. T., <i>Van Nuys</i>		9	St. Sure, F. A., <i>San Diego</i>		21			
Sprauer, V. J., <i>Los Angeles</i>		9	Sturdivant, B. F., <i>Pasadena</i>		9			
Spriggs, G. A., <i>San Francisco</i>		22	Sturgeon, C. T., <i>Los Angeles</i>		9			

T

Taber, K. W., <i>Los Angeles</i>	9
Taber, L. E., <i>San Francisco</i>	22
Takahashi, M., <i>Los Angeles</i>	9
Talbott, E. M., <i>San Francisco</i>	22
Talbott, G. M., <i>San Francisco</i>	22
Talbott, W. T., <i>Calverley</i>	6
Talmage, C. H., <i>Los Angeles</i>	9
Taltavall, W. A., <i>Redlands</i>	20
Tandowsky, R. M., <i>Pasadena</i>	9
Tanner, C. O., <i>San Diego</i>	21
Tarnutzer, B. C., <i>Los Angeles</i>	9
Tatro, R. F., <i>Loma Linda</i>	20
Tattersall, K. L., <i>Oakland</i>	1
Taubles, G. H., <i>San Francisco</i>	22
Taussig, L., <i>San Francisco</i>	22
Taylor, D. A., <i>San Francisco</i>	22
Taylor, E. M., <i>Oakland</i>	1
Taylor, E. C., <i>San Francisco</i>	22
Taylor, F. W. H., <i>Los Angeles</i>	9
Taylor, F. B., <i>Oakland</i>	1
Taylor, G. M., <i>Los Angeles</i>	9
Taylor, J. C. W., <i>San Francisco</i>	10
Taylor, L. H., <i>Oakland</i>	1
Taylor, L. E., <i>Los Angeles</i>	9
Taylor, P. A., <i>San Francisco</i>	10
Taylor, R. G., <i>Los Angeles</i>	9
Taylor, R. T., <i>Los Angeles</i>	9
Taylor, R. O., <i>San Diego</i>	21
Taylor, R. N., <i>Long Beach</i>	9
Teaby, W. L., <i>Monterey</i>	13
Teass, C. J., <i>San Luis Obispo</i>	24
Tebbe, F. H., <i>Oakland</i>	1
Tebbetts, H. E., <i>Whittier</i>	9
Tebbetts, H. B., <i>Los Angeles</i>	9
Tedstrom, M. K., <i>Anaheim</i>	15
Teel, A. W., <i>Los Angeles</i>	9
Teeter, A. L., <i>Oakland</i>	1
Temple, R. J., <i>Los Angeles</i>	9
Templeton, H. J., <i>Oakland</i>	1
Templeton, W. K., <i>Riverside</i>	17
Tepper, G. B., <i>Los Angeles</i>	9
Terrill, E. E., <i>Los Angeles</i>	9
Terry, R. A., <i>Long Beach</i>	9
Terry, W. I., <i>San Francisco</i>	22
Thayer, L. E., <i>Los Angeles</i>	9
Thearle, W. H., <i>Los Angeles</i>	9
Thelander, H. E., <i>San Francisco</i>	22
Thelen, E., <i>San Diego</i>	21
Thibodeau, J. A., <i>San Francisco</i>	22
Thieme, D. A., <i>Los Angeles</i>	9
Tholen, E. F., <i>Los Angeles</i>	9
Thomas, B., <i>Oakland</i>	1
Thomas, B. S., <i>Sacramento</i>	18

COUNTY			COUNTY			COUNTY		
NAME	COUNTY	SOCIETY NO.	NAME	COUNTY	SOCIETY NO.	NAME	COUNTY	SOCIETY NO.
Thomas, H. G., <i>Oakland</i>		1	Trehwella, J. S., <i>Montebello</i>		9	W		
Thomas, J. B., <i>Palo Alto</i>		27	Trick, T. R., <i>Los Angeles</i>		9			
Thomas, R. E., <i>Los Angeles</i>		9	Trimble, H. G., <i>Oakland</i>		1			
Thomas, W. C., <i>Long Beach</i>		9	Trimmer, E. L., <i>Los Angeles</i>		9			
Thomas, W. Mel., <i>San Diego</i>		21	Trott, L. d'N., <i>Los Angeles</i>		9			
Thomason, G., <i>Los Angeles</i>		9	Trowbridge, D. H., <i>Fresno</i>		4			
Thomason, S. D., <i>San Dimas</i>		9	Truax, J. P., <i>Lompoc</i>		26			
Thompson, A. C., <i>Mountain View</i>		27	True, H. F., <i>Sacramento</i>		18			
Thompson, A. R., <i>Rio Vista</i>		31	Truxaw, J. W., <i>Anaheim</i>		15			
Thompson, C. P., <i>San Francisco</i>		22	Tucker, R. G., <i>Alhambra</i>		9			
Thompson, C. V., <i>Pescadero</i>		25	Tully, J. J., <i>Stockton</i>		23			
Thompson, C. V., <i>Lodi</i>		23	Tupper, R. B., <i>Fresno</i>		4			
Thompson, C. W., <i>Pasadena</i>		9	Tureo, E. A., <i>San Jose</i>		27			
Thompson, E. E., <i>Oakland</i>		1	Turely, J. G., <i>Los Angeles</i>		9			
Thompson, E. H., <i>Burbank</i>		9	Turnbull, F. M., <i>Los Angeles</i>		9			
Thompson, E. E., <i>Red Bluff</i>		34	Turner, E. C., <i>Sacramento</i>		18			
Thompson, F. F., <i>Los Angeles</i>		9	Turner, J. H., <i>Huntington Park</i>		9			
Thompson, G. E., <i>Fresno</i>		4	Tuttle, S., <i>San Francisco</i>		22			
Thompson, H. A., <i>San Diego</i>		21	Tuteur, E. B., <i>Los Angeles</i>		9			
Thompson, H. D., <i>Los Angeles</i>		9	Tyler, L. G., <i>San Rafael</i>		5			
Thompson, H. F., <i>Los Angeles</i>		9	Tyroler, F. N., <i>Los Angeles</i>		9			
Thompson, H. L., <i>Los Angeles</i>		9	Twain, S. A., <i>Berkeley</i>		1			
Thompson, H. L., <i>Long Beach</i>		9	Twitcheil, E. W., <i>San Francisco</i>		22			
Thompson, K. J., <i>Oakland</i>		1	U					
Thompson, L. R., <i>San Pedro</i>		9	Uhl, G M., <i>Sacramento</i>		18			
Thompson, O. E., <i>Riverside</i>		17	Uhls, R. T., <i>Long Beach</i>		9			
Thompson, R. J., <i>Los Angeles</i>		9	Ullman, H. J., <i>Santa Barbara</i>		26			
Thompson, R. C., <i>Whittier</i>		9	Umezawa, R. L., <i>Los Angeles</i>		9			
Thompson, R. L., <i>Burbank</i>		9	Updegraff, H. L., <i>Hollywood</i>		9			
Thompson, V. P., <i>Los Angeles</i>		9	Up de Graff, T. S., <i>Pasadena</i>		9			
Thompson, W. B., <i>Los Angeles</i>		9	Ushaw, H. T., <i>Pasadena</i>		9			
Thomson, A. M., <i>Santa Rosa</i>		32	Urriolagoitia, F., <i>San Francisco</i>		22			
Thomson, D., <i>Burbank</i>		9	Ussher, N. T., <i>Santa Barbara</i>		26			
Thomson, H. S., <i>San Francisco</i>		22	Utter, J. W., <i>Anaheim</i>		15			
Thomson, R. R., <i>Oakland</i>		1	Uyeyama, H., <i>Oakland</i>		1			
Thoren, M. E., <i>Weimar</i>		16	V					
Thornburg, H. D., <i>Hollywood</i>		9	Vaehout, M. A., <i>Southgate</i>		9			
Thorne, I. W., <i>San Francisco</i>		22	Vallee, J. E., <i>Los Angeles</i>		9			
Thorner, M., <i>Santa Barbara</i>		26	Van Allen, L. K., <i>Ukiah</i>		11			
Thornton, A. J., <i>San Diego</i>		21	Vanee, H. W., <i>Pasadena</i>		9			
Thornton, D. D., <i>Los Angeles</i>		9	Vanee, J. T., <i>Sacramento</i>		18			
Thornton, J., <i>Los Angeles</i>		9	Van Cott, W. B., <i>Los Angeles</i>		9			
Thorpe, A. C., <i>Los Angeles</i>		9	Van Dalsem, S. B., <i>San Jose</i>		27			
Thorpe, F., <i>Los Angeles</i>		9	Van Dalsem, W. S., <i>San Jose</i>		27			
Thorpe, L. S., <i>Los Angeles</i>		9	Van de Carr, F. R., <i>Oakland</i>		1			
Threalfall, D. R., <i>San Jose</i>		27	Van Den Berg, W. J., <i>Sacramento</i>		18			
Thurber, F., <i>Hollywood</i>		9	Van Eman, O. H., <i>El Centro</i>		6			
Thurber, P., <i>Los Angeles</i>		9	Vanderburgh, C. M., <i>Fresno</i>		4			
Thursson, P. F., <i>Riverside</i>		17	Van der Leek, P., <i>Stockton</i>		23			
Thurflow, A. A., <i>Santa Rosa</i>		32	Van Fleet, H. D., <i>Los Angeles</i>		9			
Tiber, L. J., <i>Los Angeles</i>		9	Van Meter, A. L., <i>Stockton</i>		23			
Tiee, E. W., <i>Los Angeles</i>		9	Van Metre, H., <i>Los Angeles</i>		9			
Tickell, A. H., <i>Nevada City</i>		16	Van Nuys, R. G., <i>Berkeley</i>		1			
Tiedemann, I. D., <i>Glendale</i>		9	Van Ornum, E. N., <i>Los Angeles</i>		9			
Tiffany, D. F., <i>San Jose</i>		27	Van Paing, J. F., <i>Santa Barbara</i>		26			
Tiffany, E. V., <i>Oakland</i>		1	Van Pelt, R. S., <i>Los Angeles</i>		9			
Tillman, F. J., <i>Fresno</i>		4	Van Sciver, C. B., <i>Los Angeles</i>		9			
Tillman, T. E., <i>San Francisco</i>		22	Van Seoyoe, J. G., <i>Los Angeles</i>		9			
Tillmanns, C., <i>Los Angeles</i>		9	Van Siekle, J. R., <i>Santa Monica</i>		9			
Tillotson, M. H., <i>Woodland</i>		38	Van Soest, E. H., <i>Los Angeles</i>		9			
Tillotson, R. S., <i>Woodland</i>		38	Van Voorhees, G. T., <i>San Pedro</i>		9			
Tilton, A. L., <i>Los Angeles</i>		9	Van Zwalenburg, C., <i>Riverside</i>		17			
Timme, A. R., <i>Los Angeles</i>		9	Varden, A. E., <i>San Bernardino</i>		20			
Timon, A. N., <i>Los Angeles</i>		9	Vardon, E. M., <i>Los Angeles</i>		9			
Tippett, G. W., <i>San Francisco</i>		22	Varian, M. G., <i>Los Angeles</i>		9			
Tipton, S. P., <i>Watsonville</i>		28	Vaughan, L. B., <i>Long Beach</i>		9			
Tisinger, E. L., <i>San Bernardino</i>		20	Veeki, M. E., <i>San Francisco</i>		22			
Titcomb, L. R., <i>Los Angeles</i>		9	Veeki, V. G., <i>San Francisco</i>		22			
Titus, C. I., <i>Sacramento</i>		18	Vener, H. I., <i>Sawtelle</i>		9			
Titus, J. H., <i>Ontario</i>		20	Venzke, H., <i>Pasadena</i>		9			
Tobias, M. J., <i>Los Angeles</i>		9	Veon, J. E., <i>Bakersfield</i>		7			
Tobriner, O., <i>San Francisco</i>		22	Vereellini, G., <i>Fresno</i>		4			
Toek, E. W., <i>Orange</i>		15	Verne, V. E., <i>Long Beach</i>		9			
Todd, H. A., <i>Visalia</i>		35	Viekerson, J. I., <i>Oakland</i>		1			
Todd, J. B., <i>Los Angeles</i>		9	Victors, E. A., <i>San Francisco</i>		22			
Todorovie, D. D., <i>Tennant</i>		30	Vidgoff, I. J., <i>Los Angeles</i>		9			
Toffelmeier, D. D., <i>Oakland</i>		1	Vidrickson, H. L., <i>Weed</i>		30			
Toland, C. G., <i>Los Angeles</i>		9	Viecelli, J. D., <i>San Francisco</i>		22			
Tollefson, D. G., <i>Los Angeles</i>		9	Vieria, E., <i>Sebastopol</i>		32			
Toller, R. B., <i>Talmage</i>		11	Vinetz, J. C., <i>Los Angeles</i>		9			
Tolman, G. P., <i>Watsonville</i>		28	Viole, P. P., <i>Los Angeles</i>		9			
Tomlinson, R. F., <i>San Francisco</i>		22	Violet, C. C., <i>Garden Grove</i>		15			
Toner, J. M., <i>San Francisco</i>		22	Visalli, J., <i>San Francisco</i>		22			
Toomey, F. E., <i>San Diego</i>		21	Visehi, G. J. J., <i>Stockton</i>		23			
Topham, E., <i>San Francisco</i>		22	Visseher, L. G., <i>Los Angeles</i>		9			
Topping, F. P., <i>Sacramento</i>		18	Vizzard, W. R., <i>San Francisco</i>		22			
Topping, M. H., <i>Los Angeles</i>		9	Voight, C. E., <i>San Francisco</i>		22			
Torrell, G. J., <i>Los Angeles</i>		9	Vollert, A. J., <i>San Francisco</i>		22			
Torrano, M. A., <i>Oakland</i>		1	Vollmer, H. W., <i>Sanitarium</i>		14			
Torre, E. D., <i>San Francisco</i>		22	von Adelung, E., <i>Oakland</i>		1			
Torrens, A. S., <i>Hanford</i>		4	von Briesen, H., <i>Los Angeles</i>		9			
Torrey, H. E., <i>Palo Alto</i>		27	Von der Lieth, H. O., <i>San Francisco</i>		22			
Tourtillot, W. W., <i>Porterville</i>		35	von Geldern, H., <i>San Francisco</i>		22			
Tow, J. E., <i>San Diego</i>		21	von Geldern, C. E., <i>Sacramento</i>		18			
Tower, O. I., <i>Los Angeles</i>		9	von Wedelstaedt, B., <i>Long Beach</i>		9			
Towne, E. B., <i>San Francisco</i>		22	Voorhees, G. L., <i>Los Angeles</i>		9			
Townsend, C. E., <i>Los Angeles</i>		9	Voorhees, H. M., <i>Los Angeles</i>		9			
Traber, C. H., <i>Reedley</i>		4	Voorsanger, W. C., <i>San Francisco</i>		22			
Trainor, J. V., <i>Los Angeles</i>		9	Vowinkel, F. W., <i>San Francisco</i>		22			
Trainor, M. E., <i>Los Angeles</i>		9	Vruwink, J., <i>Los Angeles</i>		9			
Tralle, G. M., <i>Santa Ana</i>		15						
Traver, C. M., <i>Patton</i>		20						
Travis, H. P., <i>Los Angeles</i>		9						
Tretheway, L. E., <i>Manteca</i>		23						

MISCELLANY

Under this department are ordinarily grouped: News; Medical Economics; Correspondence; Twenty-five Years Ago column; Department of Public Health; California Board of Medical Examiners; and other columns as occasion may warrant. Items for the News column must be furnished by the fifteenth of the preceding month. For Book Reviews, see index on the front cover, under Miscellany.

PROPOSED CALIFORNIA PUBLIC HEALTH LEGISLATION†

Bills Introduced the First Half of the 1933 Legislative Session of Direct or Indirect Interest to the Medical Profession

Bills preceded by an asterisk (*) are of interest to the Board of Medical Examiners, and concern directly or indirectly administrative functions of said board.

Abolishing Departments—See Departments Abolished.
Acts to Amend an Act (title not stated. So-called Skeleton Bills).

A. B. 1690 to 1704, inclusive.
Acts to Repeal an Act (title not stated. So-called Skeleton Bills).

A. B. 1633.
A. B. 1635 to 1658, inclusive.

***Attorneys.**
S. B. 611, Bush et al.—re salaries of attorneys prosecuting violators of the State Poison Law.
S. B. 629, Bush, Allen et al.—re attorney for Division of Narcotic Enforcement.

***Boards Created.**
See Fortune Tellers, Fakirs, etc.
See Naturopathy.

***Board of Health**—See Department of Public Health.
A. B. 1342, Williamson—amending Sections 9, 10, 11, 12, 13, 14, 15, 16 and 20, re misbranded drugs and defining Board of Health powers.

A. B. 1848, Frazier—adding Section 3a to Tuberculosis Act.

***Chiropody.**
A. B. 313, Hornblower—amending Sections 8 and 17 of Medical Practice Act.
A. B. 1924, Gilmore—adding Section 21a to Medical Practice Act, re deformity correction appliances.

***Chiropactic.**
Assembly Constitutional Amendment No. 4, amending Section IV of Constitution re Chiropactic.
A. B. 18, Maloney—amending Section 3, 4, 9 and 12 of Chiropactic Initiative.

A. B. 1740, Maloney—an act admitting Chiropractors to State Institutions and providing for removal of superintendents thereof for unfair discrimination.

***Clinics.**
A. B. 1277, Nielsen—an act to define clinics and place them under State Board of Health. (Important.)

Codes—Amendments.
See Political Code.

Corporations.
A. B. 926, Feigenbaum—amending Section 21, re corporations.

***Departments Abolished.**
S. B. 547—abolish Division of Narcotic Enforcement.
S. B. 1010—abolish Division of Narcotic Enforcement and return to Pharmacy Board.

***Department of Professional Standards (and Vocational).**
A. B. 1813, O'Connor—an act to abolish the Department and transfer boards to other departments.
S. B. 1152, Bush, Allen, Duval et al.—adds new section to Political Code re Department of Professional and Vocational Standards.

***Department of Public Health.**
A. B. 1342, Williamson—amending Health Laws re misbranded drugs.
A. B. 1674, Alter, Boyle et al.—adding Section 272h to Political Code relating to powers and duties of Department of Public Health.

A. B. 1848, Frazier—adding Section 3a to Tuberculosis Act.

***Drugs**—See Pharmacy Act.
A. B. 784, Ross—amending Section 2 of Itinerant Vendor Act.

A. B. 1321, Boyle—adding Section 654d to Penal Code, re advertising of drugs and medicine.
A. B. 1342, Williamson—amending Section 9, 10, 11, 12, 13, 14, 15, 16 and 20, Pure Drug Act, re misbranded drugs.

***Embalmers.**
S. B. 56, Swing—adding Section 11 to Act.
A. B.* Cobb and Roberts—amending Embalmers and Funeral Directors Act. *No. 459.

A. B. 2142, McMurray—an act regulating embalmers and repealing the present law.

† Compiled by C. B. Pinkham, M. D., secretary-treasurer of the Board of Medical Examiners.

† With deletions and revisions made by the Department of Public Relations of the California Medical Association.

For comment on some of these proposed laws, see editorial department of this issue.

Eugenics—See Sterilization.

A. B. 211—providing for sterilization of select individuals in state hospitals.

Feeble-Minded.

A. B. 255, Riley—amending Section 2192, Political Code, requiring counties to pay for care of feeble-minded.
A. B. 539, Lyon—amending Political Code re incompetents.

A. B. 2246, Robinson—Spadra Hospital to be used for feeble-minded.

***Fortune Tellers and Fakirs.**

A. B. 1847—an act to license fortune tellers, fakirs and similar persons engaged in treating the human body or mind.

Health—See Department of Public . . . County.

***Hospitals**—See State Medical Service Companies.

A. B. 695, Robinson—unlawful for hospital associations to operate except under Insurance Commissioner.
A. B. 1777, Fisher—amending Section 2154, Political Code 4223, re County Hospitals. (Important.)

A. B. 2190, Bliss—amending Section 4223 of Political Code, re county hospital pay patients. (Important.)
A. B. 2246, Williamson—state hospital at Spadra to be used for feeble-minded.

S. B. 953, Fellom—regulating organization and operation of hospital associations. (Important.)

Indigents.

A. B. 1322—maintenance of in state hospitals, adding Section 12.
A. B. 1743, Dempster—amending Political Code 4041.16, re maintenance. (Important.)

A. B. 1778, Fisher—to provide aid for indigents. (Important.)
A. B. 1780, Fisher—to amend Section 2, 2½, 3 and 4 of an act re support of indigents. (Important.)

Insurance—See Hospitals . . . Medical Service Companies.
A. B. 1074, Hornblower—an act to define life, accident and health insurance.

A. B. 1084, Robinson—amending Section 1, re misrepresentation of insurance.

***Medical Practice Act.**

A. B. 313, Hornblower—amending Section 8 and 17 of Medical Practice Act re chiropodists.
A. B. 1924—adding Section 21a to Medical Practice Act, re persons retailing physical deformity correction appliances.

A. B. 1813, O'Connor—Medical Board placed under Board of Health.
S. B. 802, Williams—amending Section 11, re drugless practice.

***Medical Service Companies.**
A. B. 695, Robinson—unlawful to operate except under Insurance Commissioner.
S. B. 953, Fellom—regulating organization and operation of hospital associations. (Important.)

***Narcotics.**

A. B. 349—Pharmacy Board to take over Narcotic Enforcement.
A. B. 2246, Robinson—Spadra Hospital to be used for feeble-minded.

S. B. 547, Allen, Duval et al.—to repeal State Narcotic Act.
S. B. 1010, Allen, Duval et al.—repeal State Narcotic Act and return to Pharmacy Board.

***Narcotic Hospital.**

A. B. 2246, Robinson—Spadra Hospital to be used for care of feeble-minded.

***Naturopathy.**

A. B. 1159, Gilmore—creating Naturopathic Association of California.
A. B. 1306, Dempster—establishing a Board of Naturopathy. (Important.)

Nurses.

A. B. 288—amending Workmen's Compensation Act—registered nurse employed in hospitals accommodating three or more patients shall be held to be employee.

***Osteopathy.**

A. B. 477, Jones—repealing Osteopathy Act of 1901.

***Pharmacy.**

A. B. 349, Boyle—Pharmacy Board to take over Narcotic Department of Enforcement.
A. B. 1590, Boyle—amending State Pharmacy Act.
S. B. 1010, Bush, Allen, et al.—repealing Narcotic Act and returning to Board of Pharmacy.

Political Code.

A. B. 539, Lyon—re care of mental incompetents.
A. B. 1674, Alter, Boyle, et al.—adding Section 372h to Political Code re duties Department of Public Health.

A. B. 1743—amending Political Code, Section 4041.16, re maintenance of indigents.
A. B. 2003, Grubbs—adding Section 372h to Political Code re positions and duties in Department of Public Health.

S. B. 552, Fellom—adding Section 366h and 366m to Political Code, re State Psychiatrist.

- *Professional and Vocational Standards.*—See Department of.
- Psychiatric.*
A. B. 1487, Cronin—act to establish Psychiatric Institute.
S. B. 552, Fellom—adding Section 366h and 366m to Political Code, re State Psychiatrist.
- *Poison Act.*—See Pharmacy.
S. B. 611, Bush, Allen et al.—amending Section 6, Poison Act.
- Pure Drug Act.*—See Drugs . . . Pharmacy.
A. B. 1342, Williamson—amending Sections 6, 9, 10, 11, 12, 13, 14, 15, 16 and 20, relating to mislabeled drugs and the powers of the Board of Health.
- *Radiologists.*
A. B. 795, Craig—act to license operators of roentgen ray apparatus.
- Rehabilitation.*
A. B. 83, Jones—repealing act re rehabilitation of workmen disabled in industry.
- Sanitation.*—See Department of Public Health.
- *State Hospitals.*
A. B. 1740, Maloney—chiropractors to be admitted and superintendents removed who discriminate against them.
A. B. 2246, Robinson—Spadra Hospital to be used for care of feeble-minded.
- Sterilization.*
A. B. 211—providing for sterilization of select individuals for the protection of such individuals, the state, and future generations.
A. B. 564, Fisher and Zion—an act to provide for sterilization of state defectives.
A. B. 565, Fisher and Zion—an act to provide for voluntary sterilization of persons not in state institutions.
- Tuberculosis.*—See Board of Health.
A. B. 273, Mayo and Cloudsley—amending Section 3 of Bureau of Tuberculosis Act, re management of hospitals.
A. B. 593, Boyle—amending Section 3 and 4 of Bureau of Tuberculosis Act.
A. B. 1848, Frazier—adding Section 3a to act, re Bureau of Tuberculosis.
A. B. 1848, Frazier—repealing act establishing preventorium.
S. B. 478, Bush—amending Section 3 of Tuberculosis Act.
- Witnesses.*—Medical.
A. B. 986, Crist—an act to provide for selection of impartial medical witnesses.
A. B. 987, Crist—adding new section to Civil Code, re expert medical testimony and examination.
- Workmen's Compensation.*
A. B. 19, Meehan—amendment re amount of compensation payable.
A. B. 651, Mayo—amends Section 3, relating to terms and definitions.
A. B. 652, Mayo—adds Section 29½, relating to misrepresentation in obtaining awards.
A. B. 900, Rawls—amending Section 9, relating to compensation.
A. B. 902, Mayo—amending Section 38 and 47 of Workmen's Compensation Insurance Act.
A. B. 903, Mayo—adding Section 37a to Workmen's Compensation Insurance Act.
A. B. 1027, Mayo—amending Section 20 of Workmen's Compensation Insurance Act.
A. B. 1029, Mayo—amending Section 16 of Workmen's Compensation Insurance Act.
A. B. 1168, Morgan—amending Section 3 of Workmen's Compensation Insurance Act.
- *X-ray.* See Roentgenologists.
- Addenda.*
*S. B. 160, Seawall—unlawful for hospital associations to operate except under Insurance Commissioner. (Important.)
A. B. 1020, Hunt—amending Section 594 of the Political Code, relating to kinds of insurance and insurance companies.
A. B. 1727, Jones—re support of indigents.

NEWS

Coming Mee'ings—

American Medical Association. Milwaukee, Wisconsin, June 12-16, 1933, Olin West, M. D., 535 North Dearborn Street, Chicago, Secretary.

California Medical Association. Del Monte, April 24-27, 1933, Emma W. Pope, M. D., 450 Sutter Street, San Francisco, Secretary.

California Tuberculosis Association. Coronado, March 10-11, 1933, William C. Voorsanger, 582 Market Street, San Francisco, President.

Pan-American Medical Association. Dallas, Texas, March 21-25, 1933, Ralph Soto-Hall, 350 Post Street, San Francisco, Secretary.

Medical Broadcasts—

American Medical Association Health Talks.—The American Medical Association broadcasts on Monday

and Wednesday from 9:45 to 9:50 a. m. (central standard time) over station WBBM (770 kilocycles, or 389.4 meters).

There is also a fifteen-minute talk sponsored by the association on Saturday morning from 9:45 to 10 over station WBBM.

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San Francisco County Medical Society.—The San Francisco County Medical Society broadcasts every Tuesday from station KFRC, 4 to 4:15 p. m., and over station KJBS from 11:15 to 11:30 a. m.

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Los Angeles County Medical Association.—The radio broadcast program for the Los Angeles County Medical Association for the month of March is as follows:

Tuesday, March 7—KFI, 10:15 to 10:30 a. m., and KECA, 9:45 to 10 a. m. Subject: Release from Worry.

Tuesday, March 14—KFI, 10:15 to 10:30 a. m., and KECA, 9:45 to 10 a. m. Subject: Problems of Nutrition.

Tuesday, March 21—KFI, 10:15 to 10:30 a. m., and KECA, 9:45 to 10 a. m. Subject: What About the Heart?

Tuesday, March 28—KFI, 10:15 to 10:30 a. m., and KECA, 9:45 to 10 a. m. Subject: Convulsions in Infancy.

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Typhus Quest Fatal to Doctor.—Dr. Augustin Duran, technician at the Biological Institute in Santiago, Chile, died of typhus on February 16, having contracted an infection during experiments with vaccines for use in treatment of the disease.

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American College of Surgeons Meeting.—A sectional meeting of the American College of Surgeons for the states of Arizona and New Mexico will be held at Phoenix, on March 27 and 28. The following is a list of the visiting speakers:

Franklin H. Martin, M. D., Chicago, director general of the American College of Surgeons.

J. Bentley Squier, M. D., New York, professor of urology, Columbia University College of Physicians and Surgeons, and president of the American College of Surgeons.

William D. Haggard, M. D., Nashville, professor of clinical surgery, Vanderbilt University School of Medicine, and president-elect of the American College of Surgeons.

Charles H. Mayo, M. D., Rochester, Minnesota, professor of surgery, University of Minnesota Medical School and Graduate School, Mayo Foundation, and regent of the American College of Surgeons.

Clarence Cook Little, M. D., New York, managing director of the American Society for the Control of Cancer.

William V. Mullin, M. D., Cleveland, otolaryngologist, Cleveland, Ohio.

Alfred W. Adson, M. D., Rochester, Minnesota, professor of neurosurgery, Mayo Foundation.

Robert Jolly, M. D., Houston, superintendent of Memorial Hospital.

Bowman C. Cromwell, M. D., Chicago, associate director of the American College of Surgeons and director of clinical research.

Malcolm T. MacEachern, M. D., Chicago, associate director of the American College of Surgeons and director of hospital activities.

George Crile, M. D., Cleveland.

The tentative program follows:

MONDAY, APRIL 3

8:00-9:00 a.m.—Registration, Loung Room, Biltmore Hotel.

9:00-12:00 noon—Clinics at local hospitals.

10:00-12:00 noon—Hospital Conference, St. Vincent's Hospital Library Room. (Possibly may be held at hotel, but not definitely decided as yet.)

12:30-2:00 p.m.—Medical motion pictures, Music Room.

2:30-5:00 p.m.—Hospital Conference, Music Room.

5:00-5:30 p.m.—Annual meeting of Fellows.

8:00-10:30 p.m.—Scientific Session, Ballroom (General Surgery).

8:00-10:30 p.m.—Scientific Session, Conference Room (EENT).

TUESDAY, APRIL 4

9:00-12:00 noon—Clinics at local hospitals.

9:00-12:00 noon—Hospital Conference, Cedars of Lebanon Hospital Auditorium, Lebanon Hall.

12:30-2:00 p.m.—Medical motion pictures, Music Room.

2:30-5:00 p.m.—Scientific Session, Music Room (General Surgery).

2:30-5:00 p.m.—Scientific Session, Conference Room (EENT).

2:30-5:00 p.m.—Hospital Conference, Good Samaritan Hospital Nurses' Classroom.

8:00-10:00 p.m.—Community Health Meeting, Sala de Oro, Los Angeles Biltmore Hotel. (In case of overflow meeting, ballroom may also be utilized). Headquarters: Hotel Biltmore.

The committees in charge of the meeting are:

Executive Committee—C. G. Toland, M.D., F.A.C.S., chairman; George H. Kress, M.D., F.A.C.S., vice-chairman, and publicity; Harlan Shoemaker, M.D., F.A.C.S., finance; C. Hiram Weaver, M.D., F.A.C.S., secretary (address, 1709 West Eighth Street, Los Angeles).

Hospital Clinics Committee—Anders Peterson, M.D., F.A.C.S., California Lutheran; Maurice Kahn, M.D., F.A.C.S., Cedars of Lebanon; Guy Cochran, M.D., F.A.C.S., Children's; Simon Jesberg, M.D., Eye and Ear; Edward Ruth, M.D., F.A.C.S., Hollywood; Rea Smith, M.D., F.A.C.S., Good Samaritan; Harold Barnard, M.D., F.A.C.S., Orthopedic; E. W. Tice, M.D., F.A.C.S., Methodist; Thomas McHugh, M.D., F.A.C.S., Queen of Angels; Wayland A. Morrison, M.D., F.A.C.S., Santa Fe; Frank Breslin, M.D., F.A.C.S., St. Vincent's; George Thomason, M.D., F.A.C.S., White Memorial.

County Medical Society—Charles T. Sturgeon, M.D., F.A.C.S., president of the Los Angeles Medical Association; Harry H. Wilson, M.D., secretary of the Los Angeles County Medical Association, speaking engagements.

California Medical Charity Ruling by Attorney-General Webb.—An Associated Press news dispatch of February 16 states:

"Attorney-General U. S. Webb informed Dr. Giles S. Porter, Director of Public Health at Los Angeles, that Los Angeles County may not receive money from a person legally liable for the support of an indigent and thereafter divert that money to other purposes.

"Doctor Porter had asked concerning husbands of patients at Olive View Sanatorium who were able to pay five or ten dollars a month toward the care of their wives at the sanatorium. He asked whether acceptance of such would prevent the county from receiving the usual three dollars per week from the state for care of indigents, and if it could be accepted whether it was legal to take the money from the husbands and put it in a special fund to be used for the convalescent care of women.

"Webb ruled the county by accepting the small payments from the husband, even though not totaling three dollars per week, would prevent their acceptance of the fee from the state.

Western Hospital Association Meeting.—The Western Hospital Association, representing the interests of the twelve hundred hospitals in the eleven western states, presented its program for its 1933 One Hundred Per Cent Economic Convention in the Municipal Auditorium at Long Beach, February 22 to 25 inclusive. The program was especially designed to deal with the many economic problems which have been presented for the immediate consideration of the medical profession and hospitals. . . . This symposium on "Inevitable Changes in the Hospital World" sounded the keynote of the activities of the convention and presented features of special interest to all those associated with rendering hospital or medical service. George F. Stephens, M.D., president of the American Hospital Association, B. W. Black, M.D., president of the Western Hospital Association, J. L. Pomeroy,

M.D., Los Angeles County Health Officer, Robert E. Warner, Spokane, Bishop W. W. Rawson, Ogden, Utah, and C. Rufus Rorem, M.D., of Chicago, spoke at the Wednesday morning session. . . . Friday's program was sponsored jointly by members of the California Medical Society and the Western Hospital Association. This session was devoted to discussion on the points presented in the "Report of the Committee on the Costs of Medical Care" and its many ramifications of suggestions for periodic payment plans for hospital and medical service for persons of limited means.

International Medical Postgraduate Courses in Berlin.—These are arranged with the help of the medical faculty of the university by the Lecturers' Association for medical continuation courses and the Kaiserin Friedrich-Haus. The information bureau of the Kaiserin Friedrich-Haus, Berlin NW 7, Robert Koch-Platz 7, gives information on all questions relating to the courses for the year 1933.

Pan-American Medical Association.—(News Dispatch)—Men who have made medical history, including most of the leaders of the profession in the Western Hemisphere, will attend the Pan-American Medical Congress which will be held in Dallas March 20 to 25, Dr. John O. McReynolds, president of the congress, said. An attendance of more than two thousand is being provided for and quarters are being obtained for several trainloads of scientific, educational and commercial exhibits.

While several general sessions will be held, most of the work of the congress will be carried on at sectional meetings. There will be thirteen sections, each with a president, several vice-presidents and a secretary and a Spanish committee.

Among the more important names found in the lists of section officers are that of the president emeritus of the School of Medicine, Johns Hopkins University; Dr. Charles H. Mayo, who among other titles, holds that of surgeon and associate chief of staff of the Mayo Clinic; Dr. William M. Haggard, president-elect of the American College of Surgeons; Surgeon-General Hugh S. Cumming, United States Public Health Service; Major General Robert U. Patterson, Surgeon-General, United States Army, and Rear Admiral Charles S. Riggs, Surgeon General Medical Corps, United States Navy. The names of the Spanish-speaking officials, while less generally known in the United States, are none the less important in the profession.

Every South American nation is represented in addition to the United States and Canada.

Recognizing the siesta custom of the Spanish-speaking countries, time has been allowed on the programs for the afternoon nap. Round-table luncheons will be arranged daily. For each section a committee has been organized to give special attention to the recreation of the visitors.

Final Report of the Commission on Medical Education.—Willard C. Rappleye, M.D., director of study, announces that additional requests have made it necessary to have more copies printed. These may be secured from the Columbia University Press, New York City, at a price of \$2 a copy.

Reading References for the Study of the Economic Aspects of Medical Care.—The uncertain and uneven costs of sickness, the effect of high costs upon some families each year, the unsatisfactory incomes of physicians, the shortage of physicians and hospitals in many rural areas and other problems connected with the care and prevention of disease gave rise to widespread discussion, even during the years of prosperity. . . . Inquiries concerning the literature or other matters connected with the subject may be addressed to the Julius Rosenwald Fund, 4901 Ellis Avenue, Chicago.

Mental Hygiene of Unemployment.—The National Committee for Mental Hygiene, 450 Seventh Avenue, New York, has issued a booklet under the above title. It deals with how people react to deprivation and frustration; what is meant by emotional as against economic insecurity; the nature of the mental hygiene problem created by the depression; the character of some of the more common mental mechanisms back of apathy, resignation, aggression, panic, defeatism, despondency, credulity, antisocial behavior and other attitudes and emotional manifestations of the depression; ways and means by which problems of mental health can be constructively managed; what communities can do and are doing in meeting the mental and emotional needs of the unemployed; suggestions as to how the distraught can be helped to a healthier adjustment.

Cancer Commission Program for Del Monte Meeting. Microscopic Pathology Conference.—On Sunday, April 23 (immediately before the California Medical Association convention at Del Monte), two conferences will be held at the Del Monte Hotel from 10 a. m. to 5 p. m. One will be a microscopic pathology demonstration similar to the one conducted at Los Angeles in 1932. The following program is planned:

MORNING

- 10:00-11:00 a. m.—Connective Tissue Tumors, George D. Maner, Los Angeles.
 11:00-11:20 a. m.—Case, Lawrence Parsons, Los Angeles.
 11:20 a. m.-12:20 p. m.—Endothelioma, David A. Wood, San Francisco.
 12:20-12:40 p. m.—Case, A. M. Moody, San Francisco.
 12:40-1:00 p. m.—Case, G. Y. Rusk, San Francisco.

AFTERNOON

- 2:00-2:40 p. m.—Gastro-Intestinal Tract, Stomach. C. E. Nixon, Fresno.
 2:40-3:00 p. m.—Case, Fred Proescher, San Jose.
 3:00-3:40 p. m.—Gastro-Intestinal Tract, Colon. J. B. McNaught, Los Angeles.
 3:40-4:00 p. m.—Case, Robert A. Glenn, Oakland.
 4:00-5:00 p. m.—Kidney Tumors, E. H. Ruediger, H. A. Ball, San Diego.

Case histories, x-rays, etc., will be briefly presented by each demonstrator. Each member in attendance will then be given a microscopic slide from which to make a diagnosis, after which the case will be briefly discussed by the demonstrator. It will be necessary to limit the number in attendance to space available for microscope use; and any members desiring to attend should register promptly with the secretary of the Cancer Commission, 450 Sutter Street, San Francisco.

Inasmuch as the demonstration will be held at Del Monte, it will be necessary for each member attending to bring his own microscope. Please do not reserve a place unless you expect to be present, both morning and afternoon.

X-Ray Demonstration.—The second will be a similar demonstration on x-ray diagnosis of cancer, and will also run from 10 a. m. to 5 p. m., the following program being planned:

MORNING

- 10:00-11:00 a. m.—Stomach Cases, Milton J. Geyman, Santa Barbara.
 11:00-12:00 noon—Colon Cases, L. H. Garland, San Francisco; A. C. Siefert, Oakland.

AFTERNOON

- 2:00-3:00 p. m.—Chest Cases, R. G. Taylor, Frank S. Dolley, Los Angeles.
 3:00-3:40 p. m.—Brain Cases, O. W. Jones, Jr., Robert S. Stone, San Francisco.
 3:40-5:00 p. m.—Bone Cases, L. C. Kinney, San Diego; Henry Snure, Los Angeles; I. S. Ingber, R. R. Newell, San Francisco.

It will be necessary also to limit the attendance at this conference, in order to allow individual study of films. Those desiring to attend should register with the secretary of the Cancer Commission.

Sunday Evening Program.—On Sunday evening, following these two conferences, a program sponsored by the Cancer Commission and the Woman's Auxiliary will be held at the Del Monte Hotel. The meeting will be open to the public. Announcement of details of the program will appear in the April number of CALIFORNIA AND WESTERN MEDICINE.

California Medical History Seminar.—The California Medical History Seminar recently gave a luncheon in honor of Dr. George Sarton at the Bohemian Club, San Francisco. Doctor Sarton is editor of *Isis*, historian of science and at present Hitchcock lecturer at the University of California. Doctor Sarton talked on "The Slowness of Human Progress" and there was a discussion on "California's First Real Great Scientist." There was an exhibit commemorating the centennial of the publication of William Beaumont's *Experiments and Observations on the Gastric Juice, and the Physiology of Digestion*, Plattsburg, New York, 1933.

MEDICO LEGAL

Compensation of Physicians and Hospitals: Right to Limit Liability After Express Promise to Pay*

The occupants of an automobile were injured in a collision with a motor bus owned by the defendant. The driver of the bus took them to a hospital owned by the plaintiff physician and directed that necessary treatment and hospitalization be rendered at the defendant's expense. Two days later an investigator for the defendant's insurer determined that the defendant was not legally liable for the injury caused by the collision. Apparently, at the requests of this investigator, the defendant wrote the plaintiff that he would not be responsible for payment for further services. The plaintiff, however, completed the necessary treatment and hospitalization and sued the defendant for the total amount due. Judgment was given in his favor and the defendant appealed to the court of civil appeals of Texas, El Paso. The defendant assigned as error the refusal of the trial court to continue the trial in order to enable him to produce the insurance investigator as a witness. This refusal, the defendant contended, affected him adversely, because the investigator would have testified on behalf of the defendant, that two days after the accident he undertook to limit the contract between the plaintiff and the defendant so as to relieve the defendant from liability for future charges. But, said the court of civil appeals, without the plaintiff's assent the defendant could not limit the liability imposed by the original contract. As was said by the Supreme Court of Minnesota in *St. Barnabas Hospital v. Minneapolis*, 68 Minn. 254, 70 N. W. 1126:

The plaintiff, having taken in a helpless and severely injured man at the defendant's request, and upon its promise to pay for an indefinite time, it would be monstrous if the defendant could, the very next day, summarily withdraw its promise, leave the sick man on plaintiff's hands, and put it to the alternative of either keeping and caring for him without pay, or else cruelly and inhumanly throwing him into the street.

Since the defendant could not limit his liability under the contract, the proposed testimony of the insurance investigator was irrelevant and the trial court committed no error in refusing to continue the trial. The judgment in favor of the plaintiff was affirmed.—*Page v. Thomas (Texas)*, 47 S. W. (2d) 894. *Journal of the American Medical Association*.

* In some California cities and towns located near crossing highways, auto accidents are not infrequent. Small community hospitals have suffered heavy losses through persons and patients asking and receiving emergency and follow-up treatment and then departing without payment of bills.

CORRESPONDENCE

Subject of the Following Letter: Assembly Bill 795, Providing for a State Bureau of Roentgenology

To the Editor:—On behalf of the Radiological Section of the County Society, I desire to call your attention to Assembly Bill No. 795, introduced by Mr. Craig on January 23, 1933, and referred to the Committee on Medical and Dental Laws.

This is an Act which, after defining "roentgen rays," "roentgenologist," "roentgenograph," "roentgen machine," "roentgenologist's license," "roentgen machine license," "director" and "person," provides that no one shall maintain, operate or direct the use of any x-ray machine unless he holds a license under the provisions of this Act.

It also prohibits the installation, maintenance, or operation of any x-ray machine unless the machine has been authorized, inspected, and licensed.

It further provides that a roentgenologist's license shall be obtained by written or oral examination and that a fee shall be charged therefor.

It purports to set up safety standards.

It creates a new bureau or division in the Department of Professional and Vocational Standards and permits the director of said Department to appoint and fix the salary of a chief of such division or group.

It further permits the chief of such bureau to hire inspectors, clerks, and other employees.

It provides for the revocation of the license issued under this bill without the benefit of a hearing and on two days' notice.

It makes the violation of the provisions of this Act a misdemeanor.

It is probable that the idea behind this Act has merit. As it stands, however, the bill seems unnecessary and a further encroachment upon medical practice by non-medical persons, since, so far as I can make out, it elevates to the dignity of roentgenologist every person who secures such a license from the state. This undoubtedly paves the way for x-ray therapy by laymen and for admission as expert testimony of the evidence of laymen, cultists, etc.

The Radiological Section of the Los Angeles County Medical Association feels that such a bill should be killed. If there is a genuine desire to pass a bill to set up safety standards and to require some training on the part of technicians, I am sure that the Radiological Section of either the County or the State Medical Society would be glad to coöperate in the preparation of such a bill and to furnish its author with safety recommendations which are reasonable and efficient. We object very strongly, however, to legislation which will serve only to strengthen the position of non-medical persons in a medical field, to hamper those already licensed by the state to practice medicine in all its branches, to permit unqualified persons to give expert testimony, and to place such arbitrary powers in the hands of a bureau chief.

We would also remind you that this is not a bill affecting only roentgenologists, but it affects every man who owns, operates, or has operated for him an x-ray machine, and hence is a matter affecting a very large section of the medical profession.

Very truly yours,

LOWELL S. GOIN, M. D.

Further comments on Assembly Bill 795:
(Title of bill)—

An Act to provide for licensing and regulation of apparatus capable of producing roentgen rays or roentgenographs, and the licensing and regulation of operators of such apparatus, and to provide penalties for the violations hereof.

Section I: Line 2. Interpreted strictly, this definition to the remainder of the bill would prohibit the use of the radio, the definition being entirely incorrect.

Section I: Line 5. The word "roentgenologist" has a standard and accepted meaning, namely, a doctor of medicine especially trained in the use of roentgen rays for the diagnosis and treatment of human disease. Roentgenologists object very strongly to the assumption of this title by nonmedical persons. Radiographer would be a proper word to use in this connection.

Section I: Page 2, line 1. This section appears to specifically except doctors of medicine from the provisions of this Act, but,

Section III: Page 2, line 14, appears not to exempt doctors of medicine from the provisions of this section.

Section V: Page 2, line 33. The nature of the examination proposed is very vaguely defined, and apparently it is left almost entirely to the discretion of the director how serious such an examination shall be.

Section VI: Page 2, line 50 and following. There is no indication as to what shall constitute the standards of safety, although these have been carefully prescribed by various bodies. That part of this section (page 3, line 5) which appears to prescribe some protection is entirely unsuitable and shows no comprehension of what such protection should be.

Section XI: Page 3, line 46 and following. This seems extremely dangerous to the doctor of medicine who is a roentgenologist and is included under the provisions of this act, since this section provides that the director may revoke a license without a hearing on two days' notice, it being elsewhere provided that the operation of an x-ray machine without a license shall be a misdemeanor. It is probable that this is unconstitutional, since the principles of American law require that no man be deprived of his possessions or personal freedom without some sort of trial.

Subject of This Letter: Methylene Blue as Antidote for Cyanide Poisoning.*

To the Editor:—In the correspondence about "Methylene Blue as Antidote for Cyanide and Carbon Monoxide Poisoning" (*The Journal*, January 7, p. 59), my knowledge of the possible usefulness of methylene blue in the treatment of cyanide poisoning and my service to the San Francisco Department of Public Health have been referred to.

The use of methylene blue (methylthionine chloride, U. S. P.) in the treatment of cyanide poisoning is not original with Mrs. Brooks. . . . Following each demonstration, questions on the possible usefulness of the dye in clinical cases of poisoning have been asked by our students and colleagues, and the reply has been that it could be tried, without thoughts of originality or priority claims on our part. However, I know of no one besides Dr. J. C. Geiger who has actually made the clinical trial, which he did in accordance with directions in an outline for treatment of poisoning cases prepared by me for his use. The case of cyanide poisoning in which Doctor Geiger tried methylene blue was reported in *The Journal*, December 3, 1932, page 1944, and he drew attention to previously published work on the effects of methylene blue on cyanide poisoning. . . .

I made a survey of the treatment of poisoning cases in the six emergency hospitals of San Francisco, at the request of Doctor Geiger, April 22, 1932, and made an outline of directions for the treatment of poisoning, not only from cyanide but from many other drugs as well. In making this outline I drew freely on the "Hospital Practice for Interns," published by the American Medical Association, and also on Brun-dage's Toxicology and other sources, and on my own

* Reprinted in part from the *Journal of the American Medical Association*, February 4, 1933, because of its local and general interest to the medical profession of California.

experience. Full credit to the American Medical Association and to Brundage has been given in the outline of directions now used in the emergency hospitals here. The American Medical Association handbook referred to does not include cyanide, but this poison, together with methylene blue and some other antidotes, was included in the outline submitted to Doctor Geiger.

A consideration of all the facts indicates that the publicity in the lay press and the annoyance over credit which have followed the use of methylene blue in a case of cyanide poisoning in which mixed treatment was used have been uncalled for, regardless of the scientific merits of the case.

P. J. HANZLIK, M. D., San Francisco.

Professor of Pharmacology,
Stanford University School of Medicine.

Subject of Following Letter: A Communication Sent Out by the American Medical Association Council on Medical Education and Hospitals.

To the Editor:—The following communication has been sent to superintendents of hospitals registered by the American Medical Association.

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There is being widely distributed an announcement of the Illinois College of Physicians and Surgeons, 20 North Ashland Boulevard, Chicago, which includes the following statement:

"Courses offered and requirements for graduation are class 'A' requirements."

Inasmuch as the Council on Medical Education and Hospitals of the American Medical Association is the only body which has ever rated medical schools as class A, it is clearly implied that the above-named school conforms to the standards prescribed by this Council. Such an inference, however, is wholly unwarranted. The above institution is conducted by a group of chiropractors and does not even remotely approach the standards of a class A medical school.

You are apprized of these facts in order that you may not unwittingly employ as interns any of the graduates of this school.

Very truly yours,

WILLIAM D. CUTTER.

February, 1933.

HOSPITALS DEEMED ESSENTIAL FOR SCIENTIFIC PROGRESS

Responsibility of the medical profession for the prevention of mental diseases was stressed by Dr. Ray Lyman Wilbur, Secretary of the Interior, in an address at the opening session of the twenty-ninth annual Congress on Medical Education and Licensure today.

The main topic of the first day's sessions was the recognition of the evolution of medical practice into special fields, and the problem of how to protect the public against self-styled specialists who have not adequate training. This again was held to be the job of the medical profession, with the aid of state boards. That this age of specialists is only a transition period that will merge into a period of better prepared general practitioners was the suggestion of Dr. Irving S. Cutter, dean of Northwestern University Medical School.

"The nation-wide hospital mechanism has been badly shocked by the depression," said Doctor Wilbur, who presided at the meeting. "New methods will be required so that hospitals may not only continue as educational institutions and a home for research, but also as a place where the highest possible medical skill can be universally available.

"In the field of mental diseases we face the necessity of accepting the care of mental cases as a responsibility of the whole profession. Better training of every medical student in this field is required. For decades we have gone on viewing mental disease largely from its fully established mental states and terminal stages, rather than from the standpoint of prevention and early recognition. As a profession we must meet the problem of mental hygiene of the insane and replace the policemen and the courts in the initial handling of those with disordered minds."

The council on medical education and its staff have been engaged on this problem during the year, he reported, and also have prepared and published lists of positions specializing in radiology and pathology.

"We are prepared to extend this to other special fields," he said, "to the end that members of the profession and others may be able readily to distinguish those who have received training in various branches from those who are merely self-constituted specialists.

"Within the last five years there has been a larger number of technically qualified applicants than the medical schools of this country have been able to receive. Some of those rejected and others not qualified have migrated to European universities with the expectation of returning to this country to practice. At the present time there are probably two thousand such American medical students abroad. To deal with this problem the council has brought together representatives of various bodies to discuss ways and means of protecting this country from men and women not fully prepared. It is hoped to have uniform action from state boards to exclude from the licensing examinations all who have not fully met the prevailing standard of medical education in this country.

"The breadth of medical knowledge is so great that no man can encompass it all. Only by the development of the hospital and its relationship to the sick has it been possible for scientific medical work to be done, and only by dividing up medical work of the hospital has medical responsibility to the community been met. Specialism is the inevitable accompaniment of the advance of modern science. In the United States it has developed practically free from control. The abuses current in uncontrolled medical education of three or four decades ago are now showing themselves in nearly all specialties.

"In the process of changing and maturing medicine the American Medical Association has had a dominating influence. It is now time for the council to provide certain minimum standards of education and training for specialists listed in the American Medical Association directory. Inspectors of the council are in the field and in a position to make personal investigations."—Los Angeles Times, February 14, 1933.

THE JAFFA FOOD BUDGET *

A Minimum Dietary for Health and Efficiency

The introduction to the tables in "The Jaffa Food Budget" follows:

The following extracts from "Food Standards" and other articles written by Prof. Myer E. Jaffa may help to explain the construction of the budget and facilitate the work of using it.

The frequent changes in the prices of food renders it impossible to make any constant allowance for food, either in the family budget or the budgets of relief organizations. The amount of increase needed, or

* Published by the California State Department of Public Health. Compiled with the assistance of Adele S. Jaffa, M. D. For copies of complete budget, with food prices, etc., address Dr. W. H. Kellogg, California State Department of Public Health, Sacramento.

Approximate Amounts of Staple Foods for Different Ages

Food Classes	Oz. Per Day							Lbs. Per Week						
	Adults			Children				Adults			Children			
	Man	Woman	15 Yrs.	11 Yrs.	7 Yrs.	4 Yrs.	2 Yrs.	Man	Woman	15 Yrs.	11 Yrs.	7 Yrs.	4 Yrs.	2 Yrs.
Class I														
Meat and Fish	7.0	5.0	5.0	3.0	1.50	.75	*	3.00	2.20	2.20	1.31	.66	.33	*
Eggs	1.0	1.0	1.0	1.0	1.50	2.0	2.0	.44	.44	.44	.44	.66	.88	.88
Milk	7.0	12.0	16.0	16.0	20.00	26.0	32.0	3.00	5.25	7.0	7.0	8.75	11.37	14
Beans	1.0	.50	.50	.25	.12	.....	.....	.44	.22	.22	.11	.05	.....	.....
Class II														
Bread	16.0	9.0	11.0	8.0	5.0	3.5	1.5	7.00	3.94	4.81	3.5	2.20	1.53	.66
Other Cereals	5.0	4.0	4.0	3.0	2.5	2.0	1.5	2.20	1.75	1.75	1.31	1.1	.88	.66
Class III														
Fruit	8.0	5.0	8.0	5.0	5.0	4.0	*3.0	3.5	2.20	3.5	2.20	2.20	1.75	.13
Vegetables	16.0	12.0	12.0	10.0	8.0	5.0	2.0	7.0	5.25	5.25	4.40	3.5	2.20	.87
Class IV														
Oil	1.0	.75	.50	.25	1.2	.06	.....	.44	.33	.22	.11	.05	.03	
Butter	1.0	.75	1.0	1.0	.75	.75	.50	.44	.33	.44	.44	.33	.33	.22
Class V														
Sugar	3.0	2.0	2.25	1.5	1.25	1.0	1.0	1.33	.88	.98	.66	.55	.44	.33
Extras														
Tea and Coffee	.7	.7						.31	.31					
Sundries	?	?	?	?	?	?	?	?	?	?	?	?	?	?

* The fruit quantity is large because only the juice or finer pulp is used. If meat is given at 2 years, it may replace an egg on alternate days. If given as an extra, allowance must be made in the budget.

Vegetables include potatoes, which are estimated at 50 per cent of the total.

Sundries include materials for seasoning and flavoring the food, for "made dishes" and to give variety—salt, mustard, vanilla, yeast, cornstarch, sago, gelatin, cocoa, syrup, cheese, etc. These are added to the total cost but are not included in the list of staples as they do not all contribute to the nutritive value, and vary largely with different families. An average allowance is made for them in calculating the total calories.

The common measure of the listed foods can be judged by the following: One cup of milk, 8 ozs.; one egg weighs about 2 ozs.; one medium sized chop, 4 ozs.; a medium-sized apple or orange, 5 ozs.; one serving of potatoes or vegetables, 6 ozs. (as purchased); one serving butter, .5 oz.; one slice bread, 1 oz.

The food need of an adolescent is greatly in excess of what the age and weight seem to call for and what is allowed in the above table. An increase of 50 per cent is not unusual.

Heavy work calls for 25 per cent more food than does moderate work. Very heavy work calls for 50 per cent more food than does moderate work. Very large people require 25 per cent more food than those of average size. Very small people require 20 per cent less food than those of average size. Tall, thin people require more food than those of average build. Stout people require less food than those of average build.

The tuberculous, convalescents, and those who have been undernourished require a generous increase in food, especially of milk and eggs. * . . . (Then follow seven pages of California food costs.)

the decrease which may be justified, cannot be estimated by averaging the percentage of change in all food prices. Many expensive foods are not used by persons of small incomes, and therefore do not affect the budget. Even a very large increase in price for foods which are used rarely or in small quantities (cheese, beans, cocoa), affects the budget but little as compared with a small increase for those staple foods which are used continually or in large amounts (bread, milk, vegetables). This throws the problem of money allowance back to the problem of a food allowance as the only permanent basis for calculation. . . .

Quantity of Food.—The dietaries here presented call for only that amount of food which investigation has shown to be actually used by the body in the processes of living and of working. No allowance is made for a safety factor, for heavy work, invalidism, etc. They are, therefore, a minimum for health and efficiency, and are suited only to the "average person"—one who stands near the center of his group in age, weight, height; activity, rate of growth, temperament; health, and efficiency of his "working machinery." Food needs which deviate from the average must be considered with each individual case. . . .

Kinds of Food.—The staple foods which form a standard dietary are chosen from five classes or groups, which are all-important to the basic needs of the body and which, combined in proper proportion, form a "balanced diet." (1) The *protein* group furnishes most largely the material for growth and repair of body tissues. (2) The *starchy* group yield heat and energy for maintaining life and performing work, and gives bulk to the diet. (3) *Fruits and vegetables* supply base-forming elements which modify the effect of the acid-forming elements and help the body to maintain its mineral balance; they have hygienic properties, give bulk, and furnish heat and energy. (4) *Fats* are a concentrated source of heat, yielding two and one-quarter times as much per pound as starches. (5) *Sugar* is readily converted into energy. Vitamins and minerals, which are so essential to growth and to health, are furnished by foods of the first four classes. Some are well distributed and others limited to certain foods. . . .

Substitution of one type of food for another cannot be made in a minimum dietary without danger of decreasing its nutritive or hygienic values. A variety of fruits may be used and a variety of vegetables; starchy foods according to preference, more rice or cereal or macaroni; but starches cannot be substituted for fresh vegetables without detriment. The reverse substitution is safer, if it is remembered that beyond the point of hygienic need of the body, fruits and vegetables are a more expensive source of energy, yielding a much smaller number of calories per pound. Protein foods of vegetable origin (dried beans, peas, etc.) do not contain all the elements necessary for tissue building and are not adequate substitutes for animal protein. Fats of animal origin, butter and egg yolk, are the best sources of fat soluble vitamin, while vegetable oils have very little and do not replace butter. It is worse than poor economy to supply expensive material for growth and then limit the supply of vitamins that promote growth.

Occasional substitutions are most valuable for giving variety and can be used legitimately if credited to the proper classes and differences in food values are allowed for. Examples: Peanut butter (usually considered a "meat substitute") should be credited only one-quarter to meat, one-quarter to starch, and one-half to oil (not butter); bacon, one-third to meat and two-thirds to oil; jam one-half to fruit and one-half to sugar. One pound of canned fish equals one pound of meat; one pound of cheese equals six pints of milk for calories, but not for vitamin or mineral value; one pound of cereal equals five pounds of potatoes for calories, but the mineral ash and vitamins are different. One pound of dried prunes equals three and one-half pounds of fresh prunes or six pounds of fresh apples or peaches.

TOOTH CONSERVATION

Strong teeth are dependent to a large extent on a good diet. From the third month of prenatal life until about the eighteenth year the body is building teeth, and whether or not there is available material is dependent on food. Common sense and the careful avoidance of food fads through all these years is the best guide. With a mixed diet, which includes an adequate supply of the standard foods, such as white bread, potatoes and meats, with daily additions of those foods particularly rich in elements necessary for the teeth—milks, fruits, and green vegetables—good tooth material is assured.

Even though the teeth are built of the right material, a certain amount of exercise is required for their proper development. When about a year old, the baby can be given a piece of hard toast to chew each day. This demands mastication and will help the teeth push their way through the gum, at the same time giving the child the habit of chewing. In chewing, the supply of blood is stimulated and the gum tissue which supports the teeth grows strong and healthy. The vigorous and constant use of the teeth should become habitual.

Food that calls for grinding, tearing, and gnawing should be included in the daily diet, thus making the teeth do the work for which they were intended. Hard toast, raw fruit, celery, radishes, nuts, and such foods are valuable for this purpose.

Teeth may be constructed of fine material and may be faithfully exercised, but in addition to this, daily care to protect them from food particles that remain hidden in the mouth is essential.

The familiar saying that "a clean tooth never decays" is not an exaggeration, provided this cleanliness means not only the removal of food left about the teeth but also that the ever-present transparent coat of acid-making bacteria is taken off all tooth surfaces.

To remove the bacteria more than a casual and careless brushing of the teeth is required. Patients who boast of regular habits of brushing, frequently have to be convinced of this fact, and are amazed when the application of a solution that discolors living bacteria shows that their teeth are anything but clean in this respect. However, bacteria can be removed by brushing, if it is done in the proper way morning and evening. One good method is to place a dry toothbrush on the teeth, curving toward the gums so that the side leans against them and the ends reach between the teeth, and touch the surfaces close to the gums, which are frequently missed in the usual rotary method. In this position the brush should be moved almost in place with firm, short motions, exerting as much pressure of the arm and hand as possible. Care should be taken not to injure the gums. There are specially shaped brushes which are helpful in cleaning the backs of the teeth and other surfaces difficult to reach with the ordinary brush.

Rolls of dry cotton rubbed over the teeth are an excellent method of removing bacteria from all the surface that can be washed in this way. An instrument called the kurosis, which holds the cotton rolls firmly in place while the teeth and gums are rubbed and massaged, can be procured and will be a great help when this method of cleaning is used. Dental napkins may also be purchased in quantity and used similarly.

Another thing which I strongly recommend is the regular use of toothpicks. After each meal the teeth should be thoroughly gone over with a toothpick wrapped with cotton, if the teeth are far enough apart. If the teeth are crowded the cotton may be eliminated.

Any tooth moderately free from bacteria cannot decay. Such freedom can only be procured by intelligent, painstaking care every day. Brushing the teeth, rubbing with cotton rolls or cloth, and the use of toothpicks serve to prevent decay, just in proportion to the thoroughness and regularity with which the ever present acid-producing bacteria are removed from all tooth surfaces.

The baby's first teeth should be washed after each meal with a small brush or with dental napkins. When

able to handle a toothbrush, the child should be started on the habit of brushing the teeth in the proper manner after each meal. The repetition of brushing and rubbing is valuable not only for removing the food and bacteria accumulated around the teeth, but also for stimulating the circulation of the gum tissues, thus making them firmer and healthier.

In addition to all of this home care of the teeth, careful watching by a competent dentist is required from the start. The baby's first visit to the dentist should take place as soon as the primary teeth have all appeared. This examination will reveal any fissures or tiny imperfections which may have occurred in the enamel in the development of the teeth, and prompt treatment will prevent decay. Many parents look on the "baby" or temporary teeth as unimportant. Loss of these first teeth too early in life interferes with the proper development of the jaw, and is often the cause of irregular teeth. For this reason they should be treated with as great care as those that come later.

Calling for specially close watching are the six-year molars, the first permanent teeth, which erupt when the child is between five and seven. These may be located by counting from the front to the sixth on each side. Upon these teeth, sometimes called the key-stone of the dental arch, depend to a great extent the regularity of the permanent teeth.

From the first visit to the dentist at about the age of two, dental examinations of the teeth should be repeated every six months. This is the most economical procedure in the long run, because it insures the discovery of imperfections when they are slight and can be readily and inexpensively corrected.—T. B. Hartzell, M. D., D. M. D., in *Everybody's Health*.

CALIFORNIA MUSSELS

As a further means of protecting the public from epidemics of shellfish poisoning such as those of 1927 and 1932, the Hooper Foundation of the University of California is advocating the use of bicarbonate of soda in cooking mussels, and the removal of intestines and careful washing of clams before use.

It is pointed out that one hundred persons were poisoned by mussels gathered during the summer of 1927 along the coast in the vicinity of San Francisco Bay. Tests by Hooper Foundation research men showed that the shellfish are most toxic during a limited period of the summer, and since that time a quarantine has been established for that period. Later experience revealed that clams and other shellfish develop the same poison. In 1932, despite quarantines and published warnings, an additional forty-two persons were poisoned from mussels and clams.

Because of this situation Dr. H. Muller, instructor in research medicine at the University of California, has just reported to the California Department of Public Health as follows: "Recent experiments have shown that there is a rather simple method by which mussels may be made safer to eat. The addition of one-quarter ounce, one tablespoonful of bicarbonate of soda to each quart of water in which the shellfish are soaked destroys 85 per cent of the poison when the cooking process is continued for twenty or thirty minutes. Steaming, cooking or baking without soda does not lessen the danger of poisoning. As a matter of fact the water in which shellfish may be cooked takes up the major part of the poison, and when this water is used the danger of poisoning is increased. It is also a mistake to believe that the blackening of a silver coin can be used as an indicator of the presence of poison."

Concerning clams, Doctor Muller says: "In both clams and mussels the poison is confined almost entirely to the intestines of the bivalve, and since these organs are larger in clams they are usually discarded. Some individuals use the whole clam in making chowder. Under such conditions the danger is just as great as is that in poisonous mussels. If the intestines were always removed from clams the danger of contracting poisoning from this shellfish would be lessened greatly."

In concluding his report to the health department, Doctor Muller added; "Mussels and clams are valuable foods, especially to persons who live along the coast. There should be no fear in the eating of these shellfish, provided that the general public is well informed relative to certain dangers connected with them at certain seasons of the year. A more widespread campaign of education should be undertaken not only in newspapers but by means of outdoor signs, pamphlets, cookbooks, public school instruction, and by means of other avenues of public information. Everyone who uses shellfish should know how to prepare them properly for eating by use of bicarbonate of soda in the case of mussels and discarding of the intestines and thorough washing in the case of clams. Furthermore, the public should always respect a quarantine measure which may be established, with full assurance that it is a necessity for the protection of human life. If these procedures were followed consistently the danger of shellfish poisoning on the Pacific Coast could be greatly reduced, if not entirely eliminated."

SURGICAL TREATMENT OF FACIAL PARALYSIS

Announcement of an improved method in the surgical treatment of facial paralysis, an affliction which, impairing facial control, has long challenged the attention and sympathy of the medical profession here and abroad, is made in an article in the current issue of the quarterly bulletin of the Milbank Memorial Fund. . . . Complete control of facial expression, one of mankind's most prized possessions, has been restored to patients whose faces paralysis had robbed of expressive, mobile qualities. This is accomplished through direct repair of the injured nerve by an autoplasmic graft, writes Dr. Arthur B. Duel, author of the article. . . . It is Doctor Duel's opinion that the restoration of facial movements is not only a great boon to a patient's morale in his social contacts, but is also of tremendous importance in making him self-supporting. . . . "If I were asked to name one human feature which more than any other seemed to me to reveal the character of an individual," Doctor Duel declares, "I am sure that I should say 'facial expression!' . . . The trite saying, 'The face is the mirror of the soul,' is undoubtedly well founded. . . . Small wonder then that a malady which impairs or destroys this play of expression so manifest in every individual has always engaged the attention and sympathy of the medical profession." . . . Working first with animals, Doctor Duel and his collaborator finally demonstrated that by direct repair of the injured nerve by grafts, emotional response, as well as voluntary control, of the facial muscles could be achieved. This represents a marked advance over previous methods which at their best never permitted emotional expression. The principles which had been evolved by the animal experiments are now being successfully used on humans. Doctor Duel has now successfully operated on seventeen humans who are in varying stages of recovery. Photographs of four patients show the degree of success with which the improved method of treatment was carried out. Reproductions of well-known pictures, including drawings by Sir Charles Bell, from whom more than a century ago the term, "Bell's Palsy" was derived, show typical expressions of such emotions as fear, serenity, jealousy, et cetera. . . . The research work which led up to the gratifying improvement in results of this surgical treatment described by Doctor Duel, was made possible by contributions from the Milbank Memorial Fund, the Carnegie Corporation, the Lillia Babbitt Hyde Foundation, the New York Foundation, and a number of the author's personal friends.*

* Copies of the reprint of this article will be supplied by the Milbank Memorial Fund, 40 Wall Street, New York, upon request.

TWENTY-FIVE YEARS AGO*

EXCERPTS FROM OUR STATE MEDICAL JOURNAL

Vol. VI, No. 3, March, 1908

From some editorial notes:

Pure Milk.—Will we ever have a reasonably pure milk supply? Is it another case of commercial activity versus the survival of the fittest and human inertia? Time will show. Certainly the active work of the Pure Food Commission of the state society is doing something to improve conditions in some parts of the state—notably in the south—and the more recent activity of the California Club and County Medical Society in San Francisco seems to promise some improvement in that section in the future. . . .

One Board or Three?—It is by no means the intention of the journal to enter into a controversy with our osteopathic friends as to the relative merits of regular medicine, osteopathy or any other form or manner of attempting to alleviate the sick or distressed. The old question of one examining board or many is, however, brought up and a few words on the subject may not be amiss. . . .

Business Methods.—Systematic work and careful, exact business methods are not in the slightest degree incompatible with professionalism in its most refined form. Rather is the contrary true. The man who thoroughly systematizes his work, who is niggardly of his time, who arranges his schedule of appointments carefully and sees to it that his most valuable possession—his time—is not stolen by inconsiderate patients, finds himself able to do more things, to read more, to study more and to play more, than the man without system in his work, who finds the day gone, his energies dissipated, with many things left undone and with no inclination to study or play. . . .

San Francisco and the Plague Situation.—A careful survey of the situation in San Francisco presents to the observer certain facts and conditions the knowledge of which comes with a distinct shock. The present campaign may be divided into two clearly marked objectives. The first, of course, is the killing off of rats, and in the prosecution of this work we note that the city is spending some \$12,000, the Federal Government some \$40,000 monthly; to this amount is to be added a sum obtained by subscription from citizens which is now being collected, and will closely approximate a half million of dollars. . . .

From an article on "The Awakening of Public Interest in Sanitation" by William Freeman Snow, A. M., M. D., Associate Professor of Hygiene, Leland Stanford Junior University.

Hygiene and sanitation are as yet vague terms in the vocabulary of the public, but they are terms which are used with rapidly increasing frequency. The logical development of these terms will restrict hygiene to the individual and sanitation to his surroundings. . . .

From an article on "A Plea for United States Army Contract Surgeons" by H. du R. Phelan, M. D., San Francisco.

The untimely death of Major Carroll of the Medical Department of the Army brings out the fact that it was as a contract surgeon that he earned at the cost of his health and of his life the title of "Benefactor of Humanity," by the discovery of the agent of transmission of yellow fever.

* This column strives to mirror the work and aims of colleagues who bore the brunt of society work some twenty-five years ago. It is hoped that such presentation will be of interest to both old and recent members.

From an article on "Crimes? or Maladies!" by Antrim Edgar Osborne, M.D., Santa Clara.

It is not necessary to be very observant to notice, in visiting public penal and charitable institutions, the strong similarity which exists among their inmates. True, some are being punished for crimes, while others are being cared for because of their mental and physical weakness; and yet in institutions, apparently as wide apart as a reform school and a home for feeble-minded, you will see the same cast of features and very many of the same physical characteristics. . . .

From some county society reports:

Alameda County.—The society was called to order by President E. M. Keys, owing to the absence of Past President Dr. Daniel Crosby. . . .

The paper of the evening was presented by Dr. O. D. Hamlin, under the title of "Surgical Suggestions and Observations." Preparatory treatment is an important feature in all operative work. The condition of the kidneys and gastro-intestinal tract is most important. The majority of surgical work is not emergency, and the condition of the patient will often prove more serious than the operation. . . .

Sonoma County.—Dr. George H. Evans gave us a talk on the plague in San Francisco. He thought that Sonoma County should take measures to prevent the plague from her territory. He said that one-half per cent of rats were infected in September in San Francisco, and that the percentage had increased till January gave two per cent. . . .

CALIFORNIA STATE DEPARTMENT OF PUBLIC HEALTH

By GILES S. PORTER, M. D.
Director

California Public Health in 1870.—The committee on hospitals of the California Legislature of 1870 reported out favorably a bill which provided for the organization of the California State Board of Health. The attitude of the members of the senate committee is indicated in the report which accompanied the recommendation and which reads, in part, as follows:

"We believe that whatever relates to life and the promotion of health is of paramount importance to the human family and that a community ignorant of properly collected facts concerning its vital history is culpably neglectful and but feebly defended against the 'pestilence that walketh in darkness and destroyeth at noonday.' This belief is strengthened by what is now continually afforded in the happy results of domestic and civic hygiene, wherever practiced, urged by the progressive minds of the medical profession. . . . We confidently believe that whatever will tend to enlarge our knowledge, not only of preventive diseases but also of the lengthening out of human life, will most surely subserve the best interests of the people, and must prove of vast benefit to the state from an economical point of view. Knowledge is what is wanted, to be diffused and spread broadcast over the land, to be brought within the reach of all classes, and especially workmen. Every day of sickness, whether produced from any one of the thousand circumstances intimately connected with the several trades and vocations, insalubrity of the workshop, the city, village, or domicile, or by accident, is indeed so much cash capital deducted from the fund upon which they and their families can alone depend for support. Yet it is frequently the case that we overlook every principle of hygiene and therefore regularly pay the penalty imposed by the moloch of preventable disease, as is demonstrated in the crowded condition of county hospitals and lunatic asylums.

Not humanity, merely, but a wise policy, therefore, unite in calling upon us to do all that can be done to foster and promote sanitary investigations.

They belong to the patriot no less than the philanthropist. They involve future prosperity and national greatness. The mischief done by disease is not to be measured by the number of deaths. That is the least part of the result. The paralyzing influence upon emigration, and the natural increase of population, is sufficiently disastrous; but the real and lasting injury lies in the deterioration of race, in the seeds of disease transmitted to future generations, in the degeneracy and decay which are seldom detected till the evil is irreparable."

List of Diseases Reportable by Law—

Anthrax	Ophthalmia neonatorum
Beri-beri	Paratyphoid fever
Botulism	Pellagra
Chickenpox	Plague
Cholera, Asiatic	Pneumonia (lobar)
Coccidioidal granuloma	Psittacosis
Dengue	Rabies (animal)
Diphtheria	Rabies (human)
Dysentery (amebic)	Relapsing fever
Dysentery (bacillary)	Rocky Mountain spotted
Encephalitis (epidemic)	(or tick) fever
Erysipelas	Scarlet fever
Flukes	Septic sore throat
Food poisoning	(epidemic)
German measles	Smallpox
Glanders	Syphilis*
Gonococcus infection*	Tetanus
Hookworm	Trachoma
Influenza	Trichinosis
Jaundice (infectious)	Tuberculosis
Leprosy	Tularemia
Malaria	Typhoid fever
Measles	Typhus fever
Meningitis (meningococcic)	Undulant (Malta) fever
Meningitis (cerebrospinal)	Whooping cough
Mumps	Yellow fever

Quarantinable Diseases—

Cerebrospinal meningitis (epidemic)	Poliomyelitis
Cholera Asiatic	Scarlet fever
Diphtheria	Smallpox
Encephalitis (epidemic)	Typhoid fever
Leprosy	Typhus fever
Plague	Yellow fever

Raw Milk Versus Heated Milk.—In several California communities recently, considerable attention has been drawn to local ordinances which would require that all milk be pasteurized unless produced under the supervision of medical milk commissions. The need for the pasteurization of general milk supplies has been recognized so generally that there is little room for argument against the general policy of pasteurization.

The United States Public Health Service, Washington, D. C., has recently produced a bulletin entitled, "Do Children Who Drink Raw Milk Thrive Better Than Children Who Drink Heated Milk?" a copy of which is sent on application. The bulletin contains a report of a survey of 3,700 children in the states of Alabama, Mississippi, Florida, Georgia, North Carolina, Kentucky, Texas, Missouri, Oregon, and Washington. The detailed information as obtained from mothers of children relative to diet, health histories, and the heights and weights of the children as determined by actual measurements at the time of this survey were tabulated and studied. The ages of the children ranged from ten months to six years. The final conclusion of this survey is that the growth-promoting capacity of heated milk plus the supplementary diet received by the average American child of ten months to six years is not measurably less than the growth-promoting capacity of raw milk plus the supplementary diet received by the average American child of ten months to six years. . . .

* Reported by office number. Name and address not required.

BOARD OF MEDICAL EXAMINERS OF THE STATE OF CALIFORNIA*

By CHARLES B. PINKHAM, M.D.
Secretary-Treasurer

State Board Examiners 1933 Report.—The January, 1933, report rendered to His Excellency, Governor James Rolph, Jr., by the California Department of Professional and Vocational Standards, referring to the Board of Medical Examiners, states that the efforts of said board have "proven an effective barrier in curbing the activities of medical fakers and untrained and incompetent practitioners, who prey upon the gullible public, reaping a big harvest and at the same time leaving a trail of suffering and misery in their wake. The operations of this board have been highly successful not only in curbing the medical racketeers, but in keeping the standards of the medical profession upon a high plane. As a result of the vigilance and untiring efforts of the members and representatives of the board, many of these racketeers are now serving prison terms in California, while countless others have fled to other states to evade prosecution. However, the chief accomplishment in this regard has been to prevent many of this type of swindlers from other states coming to California. Outstanding among the swindlers whose operations have been curbed by the board in the last year have been the eyesight racketeers, whose promise of restoring vision has netted them in excess of \$30,000. Operations of peddlers who dispose of fake radium drops and inexpensive electric belts for fabulous sums have also been curbed and fake cancer cures exposed. Investigations by the board also disclosed that many hospital executives were negligent in checking the credentials of self-styled doctors whom they employed, thus resulting in several cases of fakers being given responsible positions in these institutions. In addition the board has continued to vigilantly guard against renewal of operations of fake medical schools and diploma mills and recently exposed one of these institutions in San Francisco. A study of the operations of the board for the past year would indicate that the supply of fakers, like the supply of victims, is endless. New crops appear as fast as the old one is harvested or as quickly as one group of racketeers are imprisoned or forced to leave the state. Hundreds of persons are bilked out of their last dollar by charlatans and sometimes this represents the savings of a lifetime. . . ."

The following bulletin was received from the Council on Medical Education and Hospitals of the American Medical Association:

"There is being widely distributed an announcement of the Illinois College of Physicians and Surgeons, 20 North Ashland Boulevard, Chicago, which includes the following statement:

"'Courses offered and requirements for graduation are class 'A' requirements.'

"Inasmuch as the Council on Medical Education and Hospitals of the American Medical Association is the only body which has ever rated medical schools as class A, it is clearly implied that the above named school conforms to the standards prescribed by this Council. Such an inference, however, is wholly unwarranted. The above institution is conducted by a group of chiropractors and does not even remotely approach the standards of a class A medical school.

"You are apprized of these facts in order that you may be able intelligently to advise those of your students who may be about to choose medicine as a career."

* The office addresses of the California State Board of Medical Examiners are printed in the roster on advertising page 6.

"Dr. John H. Graves, president of the State Board of Public Health, yesterday was appointed medical director of the State Industrial Accident Commission and State Compensation Insurance Fund" (San Francisco *Examiner*, February 3, 1933).

According to reports, Charles F. Aycock, sentenced in the United States District Court of Los Angeles on Tuesday, April 5, 1932, to a term of eighteen months in the United States penitentiary, McNeil Island, Washington, has lost his appeal. Aycock is said to have formerly operated the Aycock Medical Institute, Los Angeles, and extensively advertised Aycock's Tuberclecide. (Previous entries, June, 1928; April, 1929; January, 1931.)

Reports relate that on February 7, 1932, in the San Francisco Municipal Court, H. K. Dombalian pleaded guilty to a violation of the Medical Practice Act and was given a thirty-day sentence, suspended on condition that he no further violate the Medical Practice Act. He is said to be a student in a local Naturopathic School.

Reports relate that Jeannette Gray was on January 12 found guilty in the courts of Los Angeles of violation of the Medical Practice Act and sentenced to pay a fine of \$50 or serve twenty-five days in the city jail, sentence being suspended for six months.

Volume 85, No. 4429, California Decisions, published February 9, 1933, under the heading of "Minutes," shows "Howson vs. Board of Medical Examiners: By the Court—Appellant's petition to have the above entitled cause heard and determined by this Court after judgment in the District Court of Appeals of the First Appellate District, Division 1, is denied." This decision finally disposes of Doctor Howson's appeal from the judgment of the board rendered July 8, 1931, suspending his license to practice in this state for a period of one year. (Previous entry, July, 1931.)

S. B. Hunnerwell was reported to have been found guilty of violation of the Medical Practice Act in Los Angeles, February 1, 1932, and sentenced to pay a fine of \$100 or serve fifty days in the city jail. Sentence was suspended.

Mrs. Ann Johnson on January 24 pleaded guilty in the courts of Los Angeles to a charge of violation of the Medical Practice Act and was sentenced to serve sixty days in the county jail, sentence being suspended.

Reports relate that Maurice S. Kellogg was on January 24 found guilty in the courts of Los Angeles of violation of the Medical Practice Act and committed to jail. It is also reported that two counts of possession of fictitious narcotic prescriptions were filed against him. He is said to have a previous narcotic record.

Reports relate that on January 31 J. E. Matson pleaded guilty in the courts of Los Angeles on a charge of violation of the Medical Practice Act and was sentenced to pay a fine of \$100 and to serve sixty days in the city jail. Jail sentence suspended and fine paid.

Perchance other medical examining boards in the United States are not as careful as is California in checking up on the records of those seeking to practice, judging from the following article printed some time since in *Medical Economics*: "Possibly you can't fool all of the public all of the time, but here is the story of a layman who posed as a physician and fooled the public and part of the profession for seven years. During that time he

"Acted as assistant to a professor in a school of medicine; took a full-time position as physician with a Chicago health institute; opened an office in Chicago; was house physician in a department store; opened a sanitarium in Cleveland; took a medical post with the Pennsylvania Railroad, another with the Bethlehem Mines Hospital; won a commission in the Army Medical Reserve Corps; filled a vacancy in a United States Marine Hospital; was ship surgeon on a steamer; ended up as a physician in a school for the feeble-minded.

"The fraud was worked by taking the name of a real physician, and writing for a duplicate medical certificate. When a case puzzled him he called in a consultant.

"He is now held by Philadelphia police."

Reports relate that Richard J. Morrison, M. D., on January 24, 1933, in the Police Court of Santa Monica pleaded guilty to six counts of a narcotic charge and was sentenced to 180 days on each count, sentence being suspended and he being placed on probation for three years.

Frederick Flores, San Bernardino Junior College student, against whom a murder charge was dismissed Monday when a misdemeanor charge of violating the State Medical Practice Act was filed in Justice Court, was released on \$500 bond yesterday. Flores had been held in the county jail since October 6, when Mrs. Cripiano Ayala died at the county hospital, following an alleged illegal operation . . ." (San Bernardino *Telegram*, January 26, 1933).

Records show that on February 9 Eugene Rinaldo was found guilty in the courts of Los Angeles on a charge of violation of the Medical Practice Act and on February 16 was said to have been sentenced to pay a fine of \$150 or in default to serve seventy-five days in the city jail. Defendant gave notice of appeal and appeal bond was fixed at \$500. (Previous entries, September and December, 1928; February and September, 1929; September and December, 1930; June, 1931; July and December, 1932.)

On February 14 in the Justice Court of San Diego, F. A. Sagstetter, operating the "Triclast Clinic" in said city, pleaded guilty to a violation of the Medical Practice Act and was sentenced to pay a fine of \$100, the fine being suspended on condition that he not again violate the provisions of the Medical Practice Act.

"Dr. John M. Carter, physician, 1055 Washington Street, was booked by federal agents at the city prison last night for violation of the Harrison Narcotic Act. They allege he has been illegally dispensing narcotics to patients" (San Francisco *Examiner*, February 9, 1933.)

"Investigation of witch-doctor complaints against Mrs. Anna Cerrito, 440 Ellsworth Street, spread yesterday to Oakland, Fresno, and Sacramento. Thousands of dollars were said to have been collected by the woman, who claimed to dispel 'evil spirits.' Further sensations in the case, revealed exclusively in the *Chronicle* Sunday, were expected, as Dr. C. B. Pinkham of the State Medical Board and Special Agent J. W. Davidson continued their inquiry. Mrs. Cerrito is out on bail, pending trial for practicing medicine without a license, after Mr. and Mrs. Joseph Calonic, 112 Winfield Street, reported they paid \$688 for 'charms,' including old horseshoes guaranteed to 'drive out the devil,' bits of red flannel underwear cut in the shape of roses and similar material designed to cure their sick daughter. In the Oakland case Mrs. Cerrito is said to have received \$5,000 for worthless bits of cast-off material, which her 'clients' were told would bring the sick child back to health" (San Francisco *Chronicle*, January 30, 1933).



JOSEPH M. KING, M. D.
President California Medical Association
1932-1933

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RETINAL DETACHMENT—ITS OPERATIVE CURE*

REPORT OF CASES

By OTTO BARKAN, M. D.
H. GORDON SMITH, M. D.

AND
S. F. BOYLE, M. D.
San Francisco

DISCUSSION by M. F. Weymann, M. D., Los Angeles;
W. H. Roberts, M. D., Pasadena; A. Ray Irvine, M. D.,
Los Angeles.

TEN years ago Vail published the results of a circular letter sent to 281 ophthalmologists in the United States on the question of cure of retinal detachments. It was found that out of 25,000 cases less than one per thousand had become reattached spontaneously or following treatment. In reviewing the literature, as well as one's personal experiences, a case of reattachment would seem to be the exception that proves the rule. No wonder, then, that the attitude toward retinal detachment was one of therapeutic nihilism until Gonin of Lausanne focused the attention of the ophthalmological world on his ideas and methods at the International Ophthalmological Congress at Amsterdam in 1929. Therewith, therapeutic nihilism gave way to constructive efforts. It is to Gonin's credit to have brought about this change, irrespective of whether the future shall prove his ideas to be largely correct or not or whether his own particular method will be maintained. All modern methods are built upon the work of Gonin. We may now meet the problem of detachment with a fair prospect of success instead of with resignation as heretofore. It is, I think, the consensus of opinion that his work constitutes the major advance in ophthalmology of recent times.

The word "cure" has been used advisedly in the title of this paper. If the detached retina can be reattached and visual functions restored and maintained for a period of observation of eight years, as has been done, it would seem proper to apply the term "cure" in the common meaning of the word.

Formerly the treatment of retinal detachment was simple, standard, and impotent. Now, since there is a possibility of cure, it places upon one

a great responsibility and one may truly be made the arbiter of human fate. This is especially true in one-eyed cases, and, at the present stage of the operation when the operative indications are still under discussion, the technique of localization demands minute care and patience, and the technique of operation is still under development. No one who touches the subject should forget that he is entering a field of many as yet unknown factors and that he is assuming a great responsibility in the undertaking.

CLOSURE OF THE RETINAL TEAR

The scope of this paper must be limited to a brief review of the present situation and to some personal experiences and observations. It seems to be the consensus of opinion that in the type of retinal detachment under discussion, viz., the so-called idiopathic, senile, myopic, often precipitated by trauma, the hole or tear in the retina is either the primary cause or is at least in some causal relationship to the detachment. Consequently its closure would seem to be an important and perhaps an essential factor to obtain reattachment. Whether it is a *sine qua non* remains to be determined. The assumption of its causal relationship gives, in any case, the best working basis to date. Vogt and others have reported cases where repeated ignipuncture of holes had remained without result until a last small hole was discovered which, when closed by the cautery, led to prompt reattachment of the retina. We have had personal experiences which were similarly highly suggestive of the importance of the rôle played by the tear. In any case, it would seem essential to close the tear itself either by causing an adhesive choroiditis within its area or by walling it off from the surrounding retina. To accomplish this it is essential to find and localize the tear; and for this reason discussion of the subject centers upon:

1. The technique of localization of the retinal tear.
2. The technique of operation upon the tear.
3. The operative indications and prognosis.

OPERATIVE INDICATIONS

To begin with No. 3: Which detachments, or which eyes, are amenable to operation? What is the relative chance of anatomical reattachment? Of functional restitution? Of permanent "cure"? Which eyes do poorly in spite of a proper oper-

* Read before the Eye, Ear, Nose and Throat Section of the California Medical Association at the sixty-first annual session, Pasadena, May 2-5, 1932.

ation? Which do well without operation or remain stationary? Amsler is especially conservative in his indication for operation. He refused operation in forty-four out of seventy-four cases of detachment because, as he says, the "eyes seemed too sick." He defines a typical surgical case as follows: "A single tear of not too large dimensions, located in the equatorial region; a sectoriform, movable detachment of the retina in more or less clear association with the tear; a practically clear vitreous (especially in the retinal periphery); and last, a completely quiet anterior bulbar segment." In such a case, detachment and retinal tear have occurred in an apparently healthy eye and therefore offer a better surgical prognosis than in those eyes which he terms as being "too sick."

PROGNOSIS AS BASED ON PAST RESULTS

The percentage of results or "cures" varies from 20 to 50 per cent and over in the statistics of individual operators, according to the selection of material operated upon. The percentages conform rather closely, however, when the statistics are analyzed according to the operability of the case (size of tear, duration, etc.). Thus, Stein of Elschmig's Clinic reports on ninety cases seen in 1931. Ten were refused operation as being hopeless. In twenty no tear could be found and therefore the Gonin operation was not done. Out of the sixty remaining cases, fourteen were cured, or 24 per cent. With proper selection (rejection of detachments of over three months' duration, of those with very large or multiple tears or extensive retinal degeneration) the percentage of reattachments increased to about 50 per cent in the traumatic cases and to 30 per cent in the spontaneous, myopic, and senile forms. Per contra, of the twenty cases in which no tear could be found, only one was reattached by ignipuncture. This corresponds with the relatively very poor percentage of results obtained by ignipuncture before the method of Gonin gave significance to the need of closure of the tear. Stein's statistics of Elschmig's Clinic, from 1914 to 1929, is a good example of this. Of 326 detachments, treated and operated in different ways (including eighteen ignipunctures) only six reattachments were obtained, or 2 per cent.

From 1928 to 1930, Lindner reports 75 cases operated and 27 cured. Tears were localized in 59 of these cases and 23 of these were cured, or 38 per cent. In early cases the percentage increased to 64 per cent. In older cases (duration from six weeks to eight months) the percentage of cures was reduced to 28 per cent.

The factor played by the duration of the detachment is well illustrated by a series of Gonin's selected cases:

Recurrences were found to be rare after three weeks' reattachment.

The operation itself is not without its dangers, even in the most experienced hands. If the retina is friable, new tears may be produced by the ignipuncture. For this very reason, cases of friable retina more especially demand early operation before the retina may degenerate further. Axenfeld, among others, has emphasized the importance of watchful waiting in certain cases. On the other hand, Gonin warns against losing time in a monocular case with friable retina. The writers of this paper have been led through personal experience to subscribe to this view. On the whole, early operation should be the rule and medical men at large, as well as specialists, should realize the importance of early operation in cases of retinal detachment.

TECHNIQUE

Finding the Retinal Tear.—The writers have used the original Gonin technique, with slight variation. Many tears are quickly discovered; others must be looked for repeatedly under maximal mydriasis with atropin and links-glaucozan for hours at a time, on successive days and in different positions. We have discovered the tear in well over 80 per cent in our series of forty cases.

Localization of the Tear.—When the tear has been found we mark its meridian on the opposite limbus with methylene blue; then on the other side of the limbus with India ink.

Various complicated devices and instruments have been invented to obtain more accurate localization, but it is questionable whether they give results that are in any way superior to the above method, which is the one used by both Elschmig and Vogt.

We feel that we have been able further to improve this method by placing a small bit of paper in the center of the butynized cornea. We have proved to our satisfaction that it is an easy matter to determine accurately the center of a small circle such as the cornea with the naked eye. We then use an ophthalmoscope with a special head which permits slitting down of the light to a narrow long band. With this we look at the hole in the retina in such a way that the slit of light will pass through both the retinal hole and the corneal center. An assistant marks the limbus with methylene blue where the light band traverses it. The straight line connecting tear, corneal center, and limbus gives the correct meridian. On the operating table the limbal marks are connected with a black silk suture, the meridian having again been checked with the ophthalmoscope. The place of the tear is measured in the usual way by disk diameters from the

Duration of Detachment				
Time	Number of Cases Operated	Cures	Per Cent	Single Ignipuncture
Up to three weeks.....	30	24	80	16
Up to three months.....	31	15	48	15
Over three months.....	20	6	30	....

ora, is marked on the sclera with India ink, and the ignipuncture performed at this place. When the cauterization has been completed we again examine with the ophthalmoscope to insure the tear having been included and are prepared to cauterize again at the same sitting.

Space does not permit nor is it within the scope of this paper to further discuss the technique or its refinements. Suffice it to say that the procedure is still a very individual problem which has progressed far beyond its beginnings, and yet shows promise of future development. As each case is an individual problem and demands independent thinking, a summary of personal experiences is appended in the hope that it may prove of interest.

AUTHORS' EXPERIENCE

In the last one and one-half years, out of over forty cases of retinal detachment, fourteen were selected for operation. The others were advised against operation either because they were hopeless or because the prognosis seemed too poor to justify an operation and the ensuing two or three weeks' hospitalization. Of the fourteen operated cases, two were perforating injuries with a very poor prognosis. Cases of this type we should not operate today, but did so at the time, as the patients were very desirous of taking the chance of improvement, no matter how slight, and there was nothing to be lost. Another patient who should not be included in this series was a woman who was blind in both eyes as a result of a double-sided retinal detachment following cataract operation done elsewhere with the Barraquer suction method. No tear in the retina was found and the result was negative. Of the eleven remaining cases, six became reattached, one had a recurrence after six weeks, following severe direct violence to the eye. This case had been demonstrated at the meeting of our State Medical Society in San Francisco in 1931 with the retina of his only eye completely reattached and reading small print. The other cases have all remained reattached to date for periods of from ten to eighteen months. This gives a percentage of over 50 per cent reattachment. The amount of restitution of vision depended upon the condition of the retina before its detachment (in Cases 3 and 4, central retinitis antedating the detachment) and upon the duration of the detachment. In Case 5 the central scotoma was, no doubt, due to the twenty months' duration of detachment. Cases of one to two years' duration offer a progressively poorer prognosis. They may become anatomically reattached, but the chance of restoration of visual function diminishes with the lapse of time due to the degeneration that has occurred in the central region of the detached retina.

CONCLUSIONS

The operation for retinal detachment opens a new field in ophthalmic surgery and gives a chance of permanent cure in a condition which, up to the present, has, practically speaking, been incurable. In early, selected cases, 50 per cent of reattachments may be obtained with useful vision.

REPORT OF CASES

CASE 1.—E. P. H. Man, aged 65. Right eye blind since twelve years from retinal detachment. Left eye, detachment extending from above over the macular region, of six weeks' duration. A single hole present in extreme periphery. Vision, counts fingers at two feet. Operation, one ignipuncture. Result, anatomical reattachment with normal visual field. Vision, 6/10 and J II. After two months, patient received a severe trauma to this eye, with recurrence of detachment occurring within twenty minutes. No tear could be found. Operation was done without result.

✓ ✓ ✓

CASE 2.—A. B. Girl, aged 21. Myopia —4.0. Duration of detachment, two and one-half months. Vision, 6/10 and J II. Sectoform defect of field down and nasally. A very small tear in the retina was discovered in the upper outer quadrant. Bed rest of six weeks had temporary effect only, detachment recurring upon her arising from bed. As the retina in the immediate neighborhood of the original small hole appeared friable and showed new small tears as time progressed, which small tears coalesced, forming a slightly larger one, it was decided to operate without further delay. One ignipuncture was done. Result, anatomical complete reattachment. Visual field normal. Vision, 10/10 and J I. To date, two years after the operation, the condition is the same.

✓ ✓ ✓

CASE 3.—M. B. Man, aged 23. In 1928 patient noticed poor vision of the left eye by accident. Since then vision gradually continued to fail. In June, 1931, when first seen by us, the left eye showed a low-grade neuroretinitis with edema in the macular region and progressive loss of vision. In August, 1931, he had developed a retinal detachment in the lower outer quadrant, showing one definite small hole at 4 o'clock. Vision, counted fingers at three feet. Operation, first ignipuncture scar became contiguous to the hole, but did not close it. One month afterward ignipuncture was repeated, the second puncture being contiguous to the hole at its other side. At the same session, puncture was repeated and this time the hole was struck in the middle and closed. Result, complete anatomical reattachment. Vision, counts fingers at eight feet, the reduction of vision being due to the central scotoma which preceded the operation, and was a result of the retinitis. Visual field otherwise normal. Result maintained at present time over one year after operation.

✓ ✓ ✓

CASE 4.—S. S. Man, aged 60. Senile detachment of right eye almost total and reducing vision to seeing of hand movements in the temporal quadrant only. Duration, six weeks. One small tear was discovered at 10 o'clock near the ora serrata. One ignipuncture done, which closed the hole. Result, complete anatomical reattachment. Vision, 1/10. Reduced vision caused by central scotoma result of macular changes. To date, one and one-half years after operation, the result is the same.

✓ ✓ ✓

CASE 5.—Man, aged 30. Left eye injured with tennis ball twenty months previously. Duration of detachment, one and one-half years. Vision, seeing of hand movements in the lower temporal quadrant only. Total detachment of retina, except for a small portion up and in. A single small tear was localized near the ora serrata at 2 o'clock. Operation, one ignipuncture, striking the tear and closing it. Result, complete anatomical reattachment. Vision, counts fingers at two feet. Reduction of vision due to a large central scotoma antedating operation and caused by degeneration of the retina in the macular region. To date, one years after operation, the result is the same.

✓ ✓ ✓

CASE 6.—S. R. Woman, aged 65. Spontaneous detachment of ten days' duration in left eye, extending

from above over macular region, reducing vision to counting fingers at three feet. A single tear was found about $1\frac{1}{2}$ millimeters in diameter, axis 90, and was localized 22 millimeters behind the limbus. Operation: The superior rectus muscle was detached and the point of cautery was found to be just at the edge of the insertion of the superior oblique muscle. Here two cauterizations were done. After two weeks it was found that the cautery scar was one-half millimeter diskward to the hole, having just missed it. By means of the scar, however, the retina had become tacked on at this point and the detachment had receded from the macular region, the visual result being 10/10 and J I. This case is still under observation and it may be necessary to operate again.

✓ ✓ ✓

CASE 7.—Man, aged 58. Retina detached in its lower half, extending up to the macular region. Vision was reduced to 2/10. Duration of detachment, two months. Patient has nephritis. A retinal tear was discovered at 2 o'clock near the ora serrata. Single ignipuncture was done, but the scar was found to be one and one-half millimeters below the tear. After one month another ignipuncture struck the hole, but did not completely fill it and there was a small new tear at the border of the second scar. It was therefore deemed advisable not to operate any further. There was no improvement of the detachment and vision was reduced to seeing of hand movements.

✓ ✓ ✓

CASE 8.—Woman, 68 years old, both eyes having had cataracts extracted elsewhere by the Barraquer suction method. The right eye was atrophic, and the left eye showed a large detachment below, extending over the macular region. Duration of detachment, ten months. Vision, right, amaurosis; left, light perception only. No hole could be found. Ignipuncture was done in the hope of possibly improving the detachment, as patient was blind and no vision could be lost. As the result of the operation the detachment appeared a little flatter and patient was able to occasionally distinguish hand movements.

✓ ✓ ✓

CASE 9.—E. B. Aged 32. Intra-ocular steel had been extracted elsewhere with the hand magnet by the posterior route. Retinal detachment reduced vision to seeing of hand movements only. Duration, two months. A retinal tear was visible two disk diameters nasal from the optic nerve head. Ignipuncture done, striking the tear. Retinal detachment and vision was worse, however, following the operation. The fact of there having been a perforating injury and the presence of a vitreous band made the prognosis very poor in this case, and one comes to the conclusion that this type of case should not be operated upon. Vision after the operation, light perception only.

✓ ✓ ✓

CASE 10.—D. R. Woman, aged 62. Senile detachment; duration six months; almost total. Vision, light perception only; questionable hand movements. Hole in the retina found at 9 o'clock near the ora serrata. Ignipuncture done and hole was struck. In spite of this there was only slight apparent improvement in the detachment, which makes one suspect that there were multiple holes which could not be found. Vision improved to questionable counting of fingers.

✓ ✓ ✓

CASE 11.—J. D. Man, aged 32. Retinal detachment as result of trauma four months previously. Vision, counts fingers at two feet. Ignipuncture was done, and ophthalmoscopic examination make it appear that the hole had been struck. There was, however, no change in the detachment. There were in this traumatic case either multiple tears or vitreous bands and retinitis proliferans, which prevented reattachment. Vision unchanged. No effect of operation.

490 Post Street.

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DISCUSSION

M. F. WEYMANN, M. D. (2007 Wilshire Boulevard, Los Angeles).—The rôle of the retinal tear in detachment of the retina is still a matter of hypothesis. Even at present, with the method of Gonin occupying the center of attention, cures of retinal detachment are being reported by the repeated subconjunctival injection of cyanide of mercury as practiced by Sourdille; by the colmatage of La Grange; and by cauterization, either chemical or thermal, of the sclera, without actually sealing the retinal tear.

In one patient treated personally by the method of colmatage a reattachment was obtained which lasted three months, detachment recurring following the lifting of a heavy object. This operation is worthy of trial, particularly in eyes where no tear can be found. My own experience with ignipuncture has yielded unsatisfactory results, but the three times which I have operated have involved eyes of elderly patients which were nonmyopic and where preceding small vitreous hemorrhages had occurred. From a survey of cases reported a general impression is obtained that with ignipuncture the best results follow operation in young individuals, particularly where the detachment is associated with myopia; and that the poorest results are obtained in elderly nonmyopic eyes afflicted with degenerative changes.

✽

W. H. ROBERTS, M. D. (65 North Madison Avenue, Pasadena).—Since Gonin read his paper on this subject in Amsterdam in 1929 a new field of ophthalmic surgery has opened.

Doctor Barkan is certainly to be congratulated on his remarkable percentage of cures. Most surgeons report an appalling series of failures, and therein lies a warning. This operation should only be attempted by a very skillful operator and only after the most painstaking search for and exact localization of the retinal hole. It is necessary for the success of the cautery operation that this hole be closed by the cautery. In the operation advocated by Lindner-Guist this does not seem so essential. They advise numerous trephine openings not quite perforating the sclera, the number depending on the extent of the detachment. The openings are touched with the dry tip of a potassium hydroxid pencil, washing with saline solution and neutralization with one per cent sterile acetic acid. Then some of the openings are punctured to allow the subretinal fluid to escape.

This operation also requires great skill and patience and should only be attempted by surgeons possessing sufficient skill, for "fools rush in where angels fear to tread."

✽

A. RAY IRVINE, M. D. (1142 Roosevelt Building, Los Angeles).—There has been no work done in ophthalmology recently to attract such universal attention as has this new treatment for retinal detachments. We are therefore indebted to Doctor Barkan and his associates for this paper. I am rather pessimistic about the final outcome of most of these cases, however. I am confident that a fair number of permanent reattachments can be secured in early selected cases. We are sure that many cures have been reported on eyes which have later shown detachments at other points than the original where the ignipuncture was done. In these cases it is not hard to believe that, while a reattachment holds at the site of the puncture, the subsequent retraction of the vitreous body, due to the cauterization, is responsible for the later detachment, sometimes far removed from the original lesion.

The importance of quiet and hospitalization of all cases after operation for a period of two weeks cannot be overestimated. I am sure that it would be better in every large city or section to select one or two ophthalmic surgeons for this special work. Experience in special technique and localization of tears may make the difference of success or failure in these cases. Doctor Barkan is to be congratulated on the good results obtained in his cases.

~

DOCTOR BARKAN (Closing).—At the time that this paper comes back to me to close the discussion, several developments in the operation for retinal detachment have taken place which may be briefly stated as follows:

The attempts by Sourdille, Lindner, and Guist to cause broad adherence of the retina by chemical means have, in our opinion, been improved upon and superseded by the electrical methods of Safar of Vienna, Weve of Utrecht, and Larson of Stockholm, and we have been able to convince ourselves through personal experience of their efficacy. By these methods a broad area of retinal adhesion is obtainable and the retinal tear can be walled off or closed with a high degree of probability, thereby obviating the need of the very exact localization and actual striking of the tear which is essential in the method of Gonin.

We wish to thank Doctors Weyman, Roberts, and Irvine for their courtesy and for the interest which their discussions have added to this paper.

ELECTROCARDIOGRAPHIC FINDINGS IN CORONARY ARTERY DISEASE*

By ROBERT W. LANGLEY, M. D.

Los Angeles

DISCUSSION by J. F. Anderson, M.D., Los Angeles; William Dock, M.D., San Francisco; Arthur Stanley Granger, M.D., Los Angeles.

IT would be difficult indeed to evaluate the importance of the progress made in the study of diseases of the coronary arteries by means of the electrocardiograph during the last two decades. The numerous contributions to our knowledge on this subject depict a most interesting story of the advancement of science and the perfection of diagnosis of a disease until recently unrecognized.

CONTRIBUTIONS RECORDED IN LITERATURE

As early as 1909 Eppinger and Rothberger¹ described alterations of the QRS and T-waves, caused by destroying part of the left ventricular musculature by silver nitrate.

In 1920 Pardee² reported an electrocardiographic sign of coronary artery obstruction which has become the most characteristic and popularly accepted criterion for the graphic diagnosis and includes a V-shaped inversion of the T-wave; low amplitude of the ventricular complexes; a high take-off and a peculiar arching of the T-wave. Other significant abnormalities frequently found include: a widening of the QRS complex associated with notching or splintering, and an increase in the AV conduction and the development of the prominent Q-wave in Lead 3 as described by Brown, Levine, and Pardee. These observa-

tions have, to a large extent, been confirmed by Smith,³ Willius,⁴ Wearn,⁵ Levine,⁶ Wiggers,⁷ Barnes and Whitten,⁸ and particularly by Parkinson and Bedford.⁹ Barnes¹⁰ has pointed out that T-wave negativity could result not only from coronary arteriosclerosis, but from various injuries to the myocardium, the result of strain predominantly of either the right or the left ventricle; also that such strain need not be manifested in the myocardium except as hypertrophy or dilatation of one or the other ventricles. It was further established by these same workers that strain predominantly of the left ventricle was associated with inversion of the T-waves in Lead 1 or Leads 1 and 2; strain predominantly of the right ventricle with inversion of the T-waves in the combined Leads 2 and 3. More recently Barnes and Mann¹¹ have established by animal experiments that probably the left and right ventricles act as separate units, as far as the effect on the RS-T segment of the electrocardiograph is concerned.

Parkinson and Bedford found deviations of the RT and ST segments occurring early in most cases of one hundred studies of coronary thrombosis, and also found a negative T wave following later during the course of the illness. The RT and ST elevations and depressions were best seen in the first and third leads and were opposite in direction. The T-wave in some cases became evident before the RT segment returned to the iso-electric line, in which case the direction of the T-wave was always opposite to that of the RT segment. They further found that within two or three weeks after the onset of infarction the RT segment had usually returned to the iso-electric level and the T-waves were fully developed in all leads.

PITFALLS

Our knowledge of the graphic interpretation of coronary disease has been rapid but not without many pitfalls. There has frequently been a tendency on the part of overenthusiastic physicians to read too much into the cardiographic records on the one hand and to pay too little attention to the history and clinical findings on the other. It should be emphasized that the history still remains the most important aid to prognosis, and even treatment in many cases.

One must be particularly guarded in making the statement that coronary artery disease is not or has not been present from merely reading one electrocardiogram. This point is well brought out by Levine and Holland,¹² who report a study of 328 cases of coronary occlusion, with only thirty-five showing normal tracings at one time or another following the acute attack.

The variability of the character of the tracings is brought out by these men and is well known to all cardiologists who are able to have daily or frequent electrocardiograms taken during the acute and subacute stages of an occlusion. Some cases may show no changes in the tracings during the first twenty-four or even forty-eight hours of an acute coronary obstruction, but show quite marked

* Read before the joint meeting of Pathology and Bacteriology and General Medicine sections of the California Medical Association at the sixty-first annual session, Pasadena, May 2-5, 1932.

and characteristic ST and T-wave abnormalities within a week. On the contrary, however, most cases will show marked changes at the onset, with a return toward normal on improvement in the patients' condition.

Many and various cardiac irregularities may be associated with the more characteristic findings above described, and in this series several cases of complete heart-block associated with an acute coronary thrombosis are shown. Other of the more common types of irregularities occur frequently.

In 1929 I¹³ reported several cases of acute coronary occlusion wherein the T-waves had been restored to the normal upright position over a period of time. Some of these patients are still showing changes from time to time several years after the original trouble. These minor changes which are prone to undergo changes must not be looked upon too lightly, nor should we disregard the slight abnormalities wherein the patient gives a suggestive history or is complaining of slight precordial pain.

The fact that cardiac infarction may occur in the so-called silent areas of the heart muscle led Wolferth and Wood¹⁴ to report their results in two cases of acute coronary occlusion diagnosed clinically but unsatisfactorily shown by electrocardiographic tracings, except for the appearance of abnormalities in a chest lead which they term Lead 4. Following the technique they used, several patients with known coronary sclerosis were reexamined for abnormalities in Lead 4 in this series. These results were not significant in that no definite abnormalities of importance were found in cases where deviations had already been found in the standard leads.

In a recent report Levy¹⁵ submits an interesting analysis showing the percentage of cases diagnosed as coronary artery disease in relation to the total number of admissions to the medical service of the Presbyterian Hospital of New York City from 1920 to 1929, inclusive. In 1920, of 1886 cases admitted to the medical service of the hospital, twenty, or 1.1 per cent, were diagnosed as coronary artery disease. In 1929, of 2198 cases admitted, ninety-four, or 4.3 per cent, were diagnosed coronary artery disease. The average incidence during the ten-year period was 2.1 per cent.

CASES REPORTED IN THIS SERIES

The cases in this series represent 139 cases of coronary disease selected from 1,000 cases of heart disease seen in office practice or in consultation, and include arteriosclerosis of the coronary artery, thrombosis of the coronary artery, and those cases diagnosed as angina pectoris wherein the electrocardiographic evidence seemed to indicate that coronary disease was the probable pathologic factor. The incidence of the disease in this group is only 1.39 per cent. It must be pointed out, however, that these cases were, on the whole, taken from a group of ambulatory patients, while Levy's report deals with bed patients.

ANALYSIS OF CASES REPORTED

Two hundred and fifteen abnormalities were found in 139 records:

Inversion of T wave in all leads.....	42
Inversion of T wave in L2 and L3.....	37
Inversion of T wave in L1 and L2.....	12
Inversion of T wave in L3 alone.....	5
Inversion of T wave in L1 alone.....	2
Inversion of T wave in L2 alone.....	0
Inversion of T wave in L1 and L3.....	1
Prominent Q wave in L3.....	10
Interventricular block (arborization).....	38
Complete heart block.....	6
A-V block.....	8
Right bundle branch block.....	8
Left bundle branch block.....	1
Paroxysmal tachycardia (vent).....	4
Auricular fibrillation.....	6
Auricular flutter.....	1
Splintering of the QRS complex.....	5
Ventricular premature contractions.....	5
Left axis deviation.....	33
Right axis deviation.....	1

CONCLUSIONS

An analysis of the electrocardiographic abnormalities in 139 cases of coronary artery disease is given.

The presence of the so-called coronary T-wave and other criteria ordinarily accepted are not always necessary in order to make a diagnosis of coronary artery disease.

The most important clinical evidence of pathology in the coronary arterial system is frequently to be found in the alterations occurring in the electrocardiogram.

An accurate prognosis is not always possible, but important prognostic signs can be gathered by studying a series of electrocardiograms taken frequently on the same patient.

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DISCUSSION

J. F. ANDERSON, M. D. (1930 Wilshire Boulevard, Los Angeles).—I wish to emphasize a few of the points that Doctor Langley has made. In the first place, the importance of not making a diagnosis on an electrocardiogram alone. In some cases it is possible to make a diagnosis on the tracing, and in some it is possible to do so on clinical findings and history. But in either method a grave error may be made. Infections and intoxications may give similar electrocardiographic findings, and symptoms may be misleading. It is by combining the two that by far the best results are obtained. In this case we can often diagnose coronary sclerosis before thrombosis occurs, and by careful management at least postpone a more serious condition. The most valuable findings in the chronic coronary disease are: intraventricular block, as evidenced by widening of the QRS interval beyond .1 second, and bundle-branch block. In the acute cases the earliest and most characteristic finding in the electrocardiogram is displacement of the RT segment. It will take off high on the R in one or two leads, and low on the S in the other lead, or vice versa. This change may be seen in only a few hours after the attack. It is, in turn, followed by the T-wave changes. I think it would be well also to emphasize the fact that the electrocardiographic changes may be slight and may not extend through a long period of time. Thus one normal tracing after an attack, the symptoms of which suggest coronary thrombosis, does not necessarily mean that the patient does not have a coronary occlusion. It is rare indeed, however, that several tracings are negative when the trouble is really present.

There has been much discussion lately about the significance of the large Q-wave in Lead 3. Due to confusion in nomenclature, two main types of complexes are described. In the first place, an inverted R3 (S3) is shown as the large Q, when the application of Einthoven's equation readily identifies it as the former. Thus the tracing shows left-axis deviation, which is significant only if it denotes left ventricular preponderance.

The second type is a diphasic QRS in which the initial phase is directed downward. This variety may become monophasic, however, with respiration, termination of pregnancy, or loss of weight. Occasionally a tracing with normal axis deviation and a large initial downward phase is shown. When found a large Q3 is most frequently seen in cases of coronary disease and left ventricular abnormality. The cause or mechanism of production, however, has not yet been determined. The latest investigators are inclined to the belief that change in the anatomical position of the septum has more to do with its production than deficient blood supply, or myocardial damage.

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WILLIAM DOCK, M. D. (Stanford University Medical School, San Francisco).—There is nothing I can add to Doctor Langley's paper or Doctor Anderson's discussion of the electrocardiographic findings in acute myocardial infarction. It must be emphasized that the string galvanometer is an instrument exactly like the stethoscope in that it extends the examiner's powers of physical examination. Unfortunately it is more expensive than the stethoscope, but in practice it should be used, like the stethoscope, as often as necessary. In cases of typical coronary occlusion it is not necessary to think of the electrocardiogram just as it is not necessary to listen to the heart of a typical case of aortic insufficiency with bobbing neck vessels and a Corrigan pulse. However, most of us still enjoy seeing typical "coronary" tracings or hearing aortic diastolic murmurs. In cases where the diagnosis of coronary disease is doubtful, and where a correct decision is of vital importance, the taking of frequent tracings usually is of great value in furnishing a definite solution of a problem which no other form of physical examination could solve.

ARTHUR STANLEY GRANGER, M. D. (2007 Wilshire Boulevard, Los Angeles).—It will not be amiss to lay a little more stress on one or two points which have been mentioned in Doctor Langley's paper and emphasized by both Doctor Anderson and Doctor Dock in their discussions. We must remember that a very large percentage of patients presenting symptoms of angina pectoris and who, we must assume, have definite coronary disease show absolutely normal electrocardiographic tracings. Many of us have seen such patients turned aside with the diagnosis of either neuritis or neurosis, and at least one or two of them, in my experience, have later died of coronary occlusion. Again, some of the electrocardiographic signs, which are commonly found in coronary disease, may be due to other conditions. Consequently it is essential that we do not rely on the electrocardiograms alone as a means of diagnosis, but try to correlate the electrocardiographic signs with a careful history of the condition together with the physical findings, and in some instances it is necessary to make the diagnosis from the history alone. I am always suspicious of coronary disease in a patient presenting the type of pain which is commonly seen in that condition despite the absence of any positive signs, and in case of doubt it is far better to be mistaken in one's diagnosis than to err in the opposite direction.

ECZEMA—OBSERVATIONS ON DESENSITIZATION*

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THE present-day treatment of eczema or dermatitis eczematosa has been radically influenced by the newer concepts of the pathogenesis of this condition. Recent knowledge on this subject points strongly to the conclusion that eczema is not a metabolic disease, but is in the main an allergic one, in the sense that it represents a reaction of a sensitized group of cells to one or more specific excitants. Although it was long believed that sensitization to protein substances was necessary to the production of allergic reactions, we have learned that a reaction of the epidermis, with the production of clinical eczema, may be precipitated by contact with nonprotein substances which are harmless to the normal individual.

As a matter of fact, wide clinical experience shows that sensitivity to exogenous nonprotein substances is the predominant factor in the specific etiology of adult eczema,¹ and that endogenous proteins, such as foods, play a relatively unimportant rôle.² In short, the presence of clinical eczema in an individual is strongly indicative of a specific hypersensitiveness of the epidermal cells to an external excitant. It is not within the scope of this paper to present the proofs of this assertion, and the bald statement will have to be supported by references to the above representative articles from the voluminous literature on the subject.

It was the persistent search for endogenous proteins as a specific etiologic basis for eczema that

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was largely responsible for the early poor success of the allergist and dermatologist working this field.

DIAGNOSIS AND TREATMENT

In the diagnosis, the functional or patch test with suspected external irritants has largely replaced the scratch and intradermal protein tests. This method has proved an invaluable aid in the determination of previously obscure dermatitides.

In the treatment, such nonspecific contributory factors as focal infection, constipation, endocrine disturbances, "nervousness," etc., although treated when present, deserve only secondary consideration. The hope of complete and permanent cure logically lies in discovery of the basic etiology and specific therapy against it. Obviously, specific therapy consists in removal of the excitant or, if this is impracticable, in desensitization against it.

SENSITIZATION

In a discussion of desensitization, its antithesis, sensitization, demands at least brief consideration.

In spite of the uniformity of clinical characteristics in dermatitis eczematosa, etiologic and immunologic findings demand a recognition of two more or less well-defined groups.

The first, and larger, of these includes the cases of "contact dermatitis," formerly known as "dermatitis venenata." This group, of which the eruption caused by poison ivy is typical, represents a reaction of the intact skin to contact with substances usually of nonprotein nature. Sensitization to these substances usually does not result in the formation in the blood stream of demonstrable antibodies.³ Hypersensitiveness in this group is apparently not subject to hereditary influence as is shown by the fact that a large percentage of individuals may be sensitized by sufficient exposure to an eczematogenous substance and that this percentage varies with the nature of the excitant (orthoform, 45 per cent; ivy, 65 per cent; primrose and nickel salts, 100 per cent).² Although individual predisposition probably plays a part in this type of sensitization, the capacity to become specifically sensitized appears to be common to all skins to a greater or less degree.⁴ Therefore the production of such a hypersensitiveness seems to depend on one main factor—sufficient exposure to a strongly eczematogenous substance.

The second and smaller group of eczemas is composed of those cases belonging to the asthma-hay fever-eczema complex, variously designated as "allergic state," "atopy," "true allergy," or "primary allergy." They usually represent a hypersensitiveness to foreign proteins, and are subject to a definite hereditary influence.^{5, 6} The sharp segregation of this group is demanded by the fact that the blood stream in these individuals regularly contains circulating antibodies specific for the antigen. These antibodies may be demonstrated by the well-known Prausnitz-Küstner method of passive transfer. Bloch states, "Without doubt all forms of idiosyncrasy in which a clear Prausnitz-Küstner reaction is obtained, and are therefore incontestable antigen-antibody reactions, belong to one special group." Since for purposes of dis-

cussion a specific term is necessary to differentiate this group, the term "atopy" as suggested by Coca⁷ will be used here. The term applies only to those individuals who show predisposition, usually inherited, to protein sensitization and in whom free antibodies can be demonstrated for a specific antigen. Concerning these free antibodies, Coca⁸ remarks, "Their constant presence related to the excitant in hay fever, the so-called 'sensitive' group of asthmatics, and in some cases of atopic eczema, point to these bodies as the actual mechanism of the hypersensitiveness." The immediate (wheal) reaction to a protein with the scratch or intradermal test, or the demonstration of specific blood antibodies, is far from conclusive proof that the protein is the direct cause of the eczema. The wheal reaction is not eczema, and represents a reaction of a group of cells different from those concerned in eczema. The existence of such an entity as "atopic eczema" has been seriously doubted by many observers and is still the subject of controversy. However, whether the eczematogenous effect of proteins is a direct or an indirect one, the prevalence of eczema in atopic individuals leaves little doubt that endogenous protein substances may play a part in its production.⁶ This is especially true in children.

In attempting desensitization in this atopic group, two very important points must be borne in mind:

1. The individual has a hereditary predisposition to protein sensitization.
2. The presence of circulating antibodies with the possibility of a severe constitutional reaction requires extreme caution in injecting the antigen.

Although eczematous sensitization to silk is not as rare as might be supposed,⁹ the following case is unique in many respects. At first glance it seems to fall definitely within the second or "atopic" group.

REPORT OF CASE

A white male, age twenty-two years, presented an itching erythematous-squamous eruption with thickening of the skin, largely confined to the face and flexural surfaces. The upper lip, antecubital fossae, the back of the neck, and a circumscribed area on the wrist showed lichenification and fissuring. The clinical picture was essentially one of "chronic eczema."

There was a definite history of allergic disease on the paternal side. His father had asthma (horse) and eczema. A paternal aunt had asthma, from which she died, and was known to be sensitive to roses.

The patient first experienced eczema during infancy. It disappeared and recurred at irregular intervals until the age of fifteen, when it became severe and refractory to all treatment employed. Since that time the condition had become progressively worse.

Significant in the patient's history was the total absence of any manifestations of asthma, hay fever, or urticaria.

Physical examination disclosed no abnormalities beyond the skin eruption. The laboratory findings were essentially negative.

A large series of contact and percutaneous skin tests with protein and nonprotein substances showed a reaction to only one substance—silk. The reaction to silk was strongly positive with both methods. The response to the patch test was particularly interesting. Irrespective of the silk material used (sized or unsized, dyed or undyed), an erythematous pruritic area would develop within a few hours. Such a contact reaction could not be elicited, however, by prolonged exposure

to silk protein extracts obtained from two different pharmaceutical concerns. The presence in the blood of antibodies specific for silk protein, as contained in these extracts, was shown by repeated passive transfer by the method of Prausnitz-Küstner. The passively sensitized "substitute," however, showed a positive reaction to the scratch and intradermal tests only, and did not react to the patch application.

This patient had realized for some time that contact with silk irritated his skin, and, although he had not associated this fact with the persistence of his eczema, had largely discontinued the wearing of silk clothing. The admonition to avoid all silk clothing and contact with silk resulted in no appreciable clinical improvement.

The fact that only one antigen was discovered is by no means proof of the fact that we were dealing with a monovalent sensitization. Retesting with previously used and additional substances, however, failed to give any other positive reactions. It seemed conceivable that in an individual sensitive to silk, indirect contact with the substance could perpetuate the eruption. As avoidance of such indirect contact seemed impossible, desensitization was undertaken.

An initial desensitizing dose of one minim (.06 cubic centimeter) of a 1:10000 solution of silk protein extract was given subcutaneously. This was followed in twenty minutes by a constitutional reaction together with a marked focal reaction manifested by extreme pruritus and sudden exacerbation of all existing eczematous lesions. An interesting observation was the appearance at this time of urticaria and asthmatic symptoms, conditions of which the patient had never complained.

For two days after the reaction the eczema was markedly improved, the patient stating that his skin was better than at any time during the past five years.

The dosage was greatly reduced, subcutaneous injections being given at four to five-day intervals in gradually increasing amounts. The skin showed definite progressive improvement until a "tolerance level" to injections was reached. This level of tolerance remained remarkably constant, at five to five and one-half minims of a 1:1000 solution of freshly prepared extract. Exceeding this amount invariably resulted in a constitutional reaction, irrespective of how slowly the dose was increased or the time interval between injections.

Although there had been no change in occupation or environment and no local treatment had been given besides cold cream (which he had been using for years), there was marked clinical improvement at this stage. The eruption had entirely disappeared from the majority of areas involved. There remained, however, thickened, somewhat reddened, areas of the upper lip, the neck, and volar surface of the right wrist. There was also occasional itching of these areas. The patch test with silk material to an area of the back which had never been eczematous was now negative after twenty-four hours of exposure. The areas which had previously been involved still reacted to contact with silk, as shown by a localized dermatitis of the patient's face after sleeping on a satin pillow or contact with his wife's silk dress. No change was noted in the capacity of the blood serum to sensitize normal skin.

The inability to produce a higher degree of tolerance after eight months of subcutaneous injections prompted the intradermal administration of the extract. This was suggested by the observation of various investigators who noted better results with this method.

Daily intradermal injections were started with a 1:500 solution of the same extract. Only a minute amount of the solution was given at each injection, which, however, proved sufficient for the production of an immediate wheal reaction. Improvement with this type of therapy was rapid. At the end of four weeks of intradermal injections the entire skin was essentially normal. Itching and erythema had entirely disappeared, and there remained only slight thickening of the skin at the sites of the previous chronic involvement.

The patch test with silk material was now found to be negative in all areas. However, there was still no demonstrable reduction of antibodies as shown by a clear Prausnitz-Küster reaction at this time. There was also no diminution of wheal reaction to intradermal injections of silk protein.

We are forced to the conclusion that the patient has not been desensitized in the strict sense of the word, but is still "atopic." All we have accomplished, evidently, is hyposensitization of the epidermis to the point where it no longer reacts to the usual external contact with the excitant. The therapeutic requirements have been fulfilled, however, in a clinical "cure."

COMMENT

This case presents many interesting features, most of which cannot be discussed here.

Although a specific reaction was obtained to intradermal tests with silk protein extracts, it seems highly probable that some portion of silk material other than the protein itself was the immediate cause of the eczema. The active eczematogenous principle has not as yet been identified, but the reasons for such a conclusion are as follows:

1. The patch test, although positive with silk material, was negative with silk protein extract.
2. Normal skin passively sensitized with antibodies specific for silk protein failed to give a positive reaction to patch tests with silk material.
3. Apparent immunity to contact with silk material has been established in spite of an undiminished antibody reaction to silk antigen.

We have merely demonstrated, therefore, the existence of contact dermatitis in an atopic individual. Although the excitant for both the epidermal and atopic reactions was silk, we have not proved the protein fraction to be the cause of the eruption, nor the existence of such an entity as "atopic eczema."

A parallel example has recently been reported by Brown, Milford, and Coca¹⁰ in a case of hay fever with eczema, both symptoms being due to hypersensitiveness to ragweed pollen. It was definitely established that the protein excitant of the hay fever did not cause the eczema, but that the latter was produced by the nonprotein pollen oil.

This reasoning changes our ideas concerning the specificity of the desensitization with the protein extract. What we had at first presumed to be specific therapy was probably nonspecific for the eczema. Yet this form of treatment was followed by marked clinical improvement.

We have long known that hyposensitization in the human is not analogous to anaphylactic desensitization in lower animals.¹¹ In the latter, immunity is established by specific neutralization of the antibodies and is readily accomplished. In the human this has been shown not to be the case. Attempted desensitization in atopic individuals does not result in a decrease in the blood antibodies (Coca).

The clinical manifestations of atopy are not due to the mere presence of free antibodies, but demand a hypersensitive or atopic state of the shock organ as well. Since antibodies have been demonstrated in the absence of clinical symptoms,¹² as well as after therapeutic hyposensitization, the beneficial results of treatment in these cases must be attributed to changes in the shock organ.

Whether this altered response of the shock organ is due to a local neutralization of fixed antibodies or to exhaustion of its capacity to react is still an unsettled question.

The apparent advantage of the intradermal over the subcutaneous injections is an interesting one. Sulzberger and Wise¹³ recommended this method after successful treatment of a case of ragweed dermatitis. Thommen¹⁴ reports that intradermal injections with pollen extracts in hay fever have proved "decidedly superior" to the subcutaneous method. Phillips¹⁵ reported excellent results with this method and made the interesting observation that the clinical improvement was not dependent upon the amount of antigen injected, but upon the degree of local reaction produced.

A rational explanation of these results is seen in the recent work of Storm van Leeuwen.¹⁶ He has shown that a specific antibody-antigen reaction in the skin reduces the hypersensitiveness to other allergens, and that this nonspecific hyposensitization is directly proportionate to the degree of local reaction produced. This effect was not obtained with wheal reactions to histamin, and the author concludes that the specific reaction has liberated an "intermediary substance," which is an essential factor in hyposensitization. In other words, a substance produced by the interaction of antigen and antibody in the skin is an important element in human hyposensitization.

If this is true, and if epidermal sensitization as encountered in eczema is based on the same mechanism as that of other forms of allergy, we are furnished with an invaluable method of treating eczema in atopic individuals. Further work on this problem is now in progress and will be the basis of a subsequent report.

The immense field opened for this type of therapy is at once obvious. Although the determination of the actual excitant in eczema has been materially aided by the use of the patch test, there still remains a fair percentage of cases in which the exciting substance eludes detection or, if found, cannot be removed.

Specific desensitization has, on the whole, been particularly disappointing in eczema. This may be due, as Bloch suggests, to the tenacity with which the antibody is fixed to the epidermal cell. However, if a prime factor in the process of hyposensitization is the formation of an intermediary desensitizing substance, it is readily seen that the uncomplicated case of contact dermatitis is denied the benefits of this mechanism. It is generally agreed that specific blood antibodies are usually not produced for nonprotein eczematogenous substances. The extract of poison ivy or poison oak may, therefore, be injected subcutaneously or intradermally without the production (except in rare cases) of a constitutional or local reaction.

Theoretically, therefore, such nonspecific hyposensitization of the epidermis requires the existence of an atopic terrain. In such an individual the determination and intradermal injection of a specific atopen should have a nonspecific desensitizing effect on the epidermis irrespective of the nature of the excitant.

I believe that the results obtained in the case reported are far better than those usually seen in attempted specific desensitization in eczema. Since the treatment used was probably nonspecific for the epidermal hypersensitiveness, the explanation of these results may lie in some such mechanism as outlined.

SUMMARY

A case of intractable eczema due to silk is reported in which circulating antibodies specific for silk protein were demonstrated.

The identity of the silk atopen and the skin irritant seems highly improbable.

Injections of silk protein extract (although probably nonspecific for the eczema) were followed by clinical "cure."

Intradermal injections with the production of a local reaction seemed to be more effective than those given subcutaneously.

Such therapy may prove valuable in the nonspecific treatment of eczema occurring in atopic individuals.

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DISCUSSION

ERNEST D. CHIPMAN, M. D. (2000 Van Ness Avenue, San Francisco).—Doctor Allen's paper opens a wide field for discussion which may follow specific or general lines.

Specifically we have to deal with a patient who had an intractable eczema, who reacted to silk when the patch test was employed, but in whom patch tests with silk protein extract were negative. This patient,

however, was cured by the injection of silk protein extract.

It is intimated that these injections were nonspecific for the eczema, and reference is made to the work of Storm van Leeuwen in which it was shown that a specific antibody-antigen reaction in the skin reduces the hypersensitiveness to other allergens.

This case report is of value because it emphasizes the fact that not all allergic reactions are of protein origin and especially because it opens up to our imagination valuable therapeutic possibilities through non-specific hyposensitization.

In a general sense this paper is of value because of its forthright position in the etiology of eczema. The statement that "sensitivity to exogenous nonprotein substances is the paramount factor in the etiology of adult eczema and that endogenous proteins, such as foods, play a relatively unimportant rôle" should be carefully taken to heart by all of us.

Tradition is tenacious and we part with our deeply rooted notions only after violent struggles. May we ever put over the concept of an eczema that is not even remotely related to the ultimate fate of the protein molecule? May we ever convince the followers of high and holy tradition that because shrimps cause hives in one person no subject of skin disease may eat food from the salt sea? May we ever establish faith in the principle that when dealing with a dermatitis of unknown origin we shall spend our time to better advantage in searching external contacts than in ordering starvation diets or multiple laboratory tests?

If one feels pessimistic about eczema let him ponder over the implications of this paper and be of good cheer.

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GEORGE PINESS, M. D. (1136 West Sixth Street, Los Angeles).—There is one statement of Doctor Allen's to which exception must be taken unless it be modified and that is, "Wide clinical experience shows that sensitivity to exogenous nonprotein substances is the predominant factor in the specific etiology of adult eczema, and that endogenous proteins, such as foods, play a relatively unimportant rôle." In the first place, it must be emphasized that Doctor Allen speaks of adult eczema, thereby intimating that his statements do not apply to infantile eczema and that adult eczema always differs from infantile eczema in its etiology. This is too broad a statement to leave unchallenged, for many cases of adult eczema undoubtedly belong to the same type or group as infantile eczema and are due to the reaction of endogenous proteins on an allergic individual. Undoubtedly a goodly number of adult eczemas, so-called, are due to contact with exogenous substances, but overemphasis of this fact would leave undiagnosed many cases which can only be recognized by the use of protein skin tests.

The diagnosis of eczema or dermatitis should be made before testing is done, and can be made from the clinical history and character of the lesion. The etiology may then be determined by means of skin testing as Doctor Allen discussed fully in his paper. In our experience all methods are valuable, but one must not be too dogmatic in advising any single one of these methods as being the best. Each of them has a definite place. In the dermatitis due to nonprotein substances we advocate the patch test, and suggest its use also in the forms of dermatitis due to local contact with substances of protein nature, such as is seen on hands of cosmeticians working with orris root, henna, bran; the grocer who handles cereals, etc.; and many other occupational types, as baker, housewife, etc. But our experience over a period of years has taught us that the endogenous group rarely react by the patch test; instead, however, they give excellent and characteristic reactions by the scratch or intracutaneous methods of testing. Again I wish to reiterate that one must not become overenthusiastic over a single method; all of them are valuable aids in assisting us in determining the etiology of dermatitis or eczema when used on properly selected cases.

The case reported by Doctor Allen is not uncommonly seen in a large allergic clinic, and it is to be

expected with such a history that the individual should react to silk by any method of testing. In other words, given a sensitive individual tested with a specific protein to which he is sensitive a positive skin reaction will result.

Treatment with specific antigens gives excellent results in most cases of dermatitis due to protein sensitivity, provided proper dosage is given at intervals sufficiently far enough apart to avoid constitutional reactions. The case reported obtained excellent clinical results which may be permanent. However, one must not be too optimistic as it is possible that the individual's tolerance may be broken down again in the future.

The point brought to our attention in this case was the absence of respiratory allergic symptoms. This is characteristic of the allergic dermatitis of the contact type.

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ALBERT H. ROWE, M. D. (242 Moss Avenue, Oakland).—The relative importance of exogenous as compared with endogenous proteins in the eczema of adults is reversed in infancy as Doctor Allen has mentioned, since most eczema in the first years of life is due to food allergy. My experience, however, still emphasizes the importance of considering ingestants as a cause of eczema in adults and consequently points to the advisability of routine scratch tests followed by intradermal tests with all types of inhalants and foods which have failed to react by the scratch test. Diet trial is also of great value in negative reactors in the diagnosis of food allergy and to determine the true significance of positive food tests. Eczema due to food allergy may be localized and suggestive of contact allergy as exemplified by such eczema, due to wheat, milk, and eggs, of several years' duration on the face of a woman. This patient, moreover, failed to react to these food allergens, and her diagnosis was made through diet trial with elimination diets. The necessity of recognizing food allergy in dermatitis in all ages has been stressed in Urbach's recent book.

But eczema in adults is most frequently due to contact or air-borne substances which can frequently be shown by routine scratch and intradermal reactions. Thus, a woman with a dermatitis all over the face, previously diagnosed lupus erythematosus, reacted intradermally to rose pollen. When she stopped burying her face in roses, which were constantly in her rooms, and received desensitization therapy to rose pollen, she was relieved. Many patients in youth and adult life have dermatitis on the face, neck, arms, and legs due to pollen allergy which can be demonstrated by skin tests.

The patch test should be freely used in the problems of dermatitis. When history suggests definite or unusual contact etiology, it may be used alone without resort to scratch or intradermal tests. Patch-testing should be persisted in with all substances with which the patient has any contact, especially if the other skin tests have not reacted or if such reactions fail to explain the difficulty. The foliage of shrubs, weeds, trees or flowers, and not their pollens, frequently cause eczema only demonstrable with patch-testing. A host of substances such as dyes, drugs, cosmetics, materials used as clothing or furnishings, soaps and occupational substances only react through patch-testing. As Doctor Allen points out, the main requisite for sensitization is sufficiently prolonged contact with such a substance.

Doctor Allen's discussion of his interesting case of silk dermatitis is worthy of study, and his success with intradermal treatment is stimulating to thought. I feel that subcutaneous therapy according to the accepted methods of administration of air-borne allergens might have been carried up to a higher dosage with continued therapy and that the same result, possibly more lasting, might thereby have been obtained. However, the value of intradermal therapy in contact dermatitis must receive more consideration in the future, especially in view of the author's suggestion that it may be nonspecific in part of its activity.

DOCTOR ALLEN (Closing).—I certainly do not wish to imply that protein hypersensitiveness can be ignored as a cause of eczema. The wheal reaction to the scratch or intradermal protein tests is not eczema and does not constitute conclusive proof of the eczematogenous effect of a substance. But it is unquestionable that an allergic reaction to proteins plays an important part in the production of some cases of eczema. Irrespective of whether the effect of such protein sensitization is a direct or an indirect one, it should be given full consideration in the approach to a case.

The point I wished to stress was the relative importance of external contactants in the production of adult eczema. As Doctor Piness has pointed out, I have used the qualifying term "adult" because I believe this type usually represents a different etiology from that concerned in infantile eczema.

True "atopy" seems to be an inherited characteristic and allergic symptoms may appear at birth or shortly afterward. Epidermal sensitivity to contact excitants, however, requires repeated exposure (frequently years) for its production. Therefore this type of reaction is seldom seen in infants. On the other hand, eczematous reaction to endogenous proteins as seen in infantile eczema tends to compensate spontaneously and usually disappears in childhood. Some individuals, it is true, carry an infantile eczema into adult life without remission, and cases of adult eczema have been reported so highly sensitive to a food that the ingestion of a minute amount would cause an eruption.

In the main, however, recent studies have given more and more importance to contact excitants in adult eczema at the expense of endogenous proteins.

X-RAY ASPECTS OF FUNCTIONAL DISORDERS OF THE COLON*

By HOWARD E. RUGGLES, M. D.
San Francisco

DISCUSSION by R. G. Taylor, M. D., Los Angeles; Carl B. Bowen, M. D., Oakland; Charles M. Richards, M. D., San Jose.

MOST writers on irritable colon emphasize the importance of the nervous element in its causation, and any extended experience with these patients confirms that impression. The nerve supply to the descending colon and sigmoid, which are the segments commonly affected, is intimately related to that of the pelvic organs, and both sympathetic and craniosacral fibers are distributed throughout the colon. The internal sphincter and adjacent colon are innervated from thoracolumbar fibers through the inferior mesenteric and the hypogastric nerves which latter are also an afferent path from the bladder and pelvic organs. There is also a craniosacral supply through the pudendal nerve. Sympathetic activity causes a relaxation of the internal sphincter and rectum and, to a less extent, of the sigmoid and descending colon. Craniosacral impulses have an opposite effect. Thus the appearance of the colon is a good index of the balance between sympathetic and parasympathetic systems, a large colon representing sympathetic preponderance and a small one lowered sympathetic or increased craniosacral activity. The extrinsic control of the bowel is well shown in the results of sympathectomy in cases of mega-

colon, interruption of the sympathetic innervation producing a striking contraction in the diameter and length of the gut.

COLON TYPES

The size and position of the colon varies with the type of individual. A stocky, heavy-set male, with a small hypertonic stomach and perhaps a tendency to high blood pressure, will usually have a large redundant colon, all evidence of a relatively active sympathetic system. In contrast, we find the thin asthenic person, more commonly a woman, with a large atonic stomach and a short, narrow colon lying in the iliac fossa, showing a low blood pressure, with frequent complaints of colon discomfort, attacks of diarrhea, and the usual story of an irritable colon.

These are the hyposympathetics, and perhaps adrenal cortex is what they need. The emotional element is strong and often based upon a background of fear, social or family conflicts, or even a sudden drop in the Dow Jones averages. Men seem to manifest nervous strain and exhaustion at the pylorus, women in their colons. "Old maids" of both sexes are apt to be constipated.

There is a definite reciprocal relation between the behavior of the ascending and the lower descending portions of the colon. We are all familiar with the great dilatation of the cecum which occurs in obstruction of the descending segment, and some recent studies in Chicago have shown that an increase of tone in the descending colon causes a direct relaxation of the ascending portion. Peristalsis in the ascending colon is often accompanied by shortening of the distal segments. The ascending colon appears to be a dehydrator and the site of bacterial and cellulose digestion. The transverse and descending portions accomplish additional dehydration and gradual onward propulsion of their contents.

HOW NORMAL COLONS VARY FROM DAY TO DAY

In following individual normal colons day after day, we have been impressed by the variability of the same colon in tone and motility and the influence of an adequate water intake. An ample supply of water in persons not accustomed to it means quicker evacuation of the cecum and a less tonic descending portion. It is interesting that in several of the female patients there was a striking evacuation of the transverse and descending colon beginning two days before the onset of menstruation. Doctor Stone at the University of California Hospital has recently demonstrated changes in the length and size of the colon by refilling the bowel after a first enema has been expelled. Dilated loops are found narrower and shorter and the whole tone of the gut is often increased at least temporarily.

X-RAY EVIDENCE OF COLON IRRITABILITY

The x-ray evidence of colon irritability is found in hypertonicity of the transverse and descending colon; in broad, deep and widely spaced haustral constrictions or a comparative absence of haustra. Occasionally in acute cases we see fine, closely spaced constrictions of unequal depth which prob-

* Read before the joint meeting of the Radiology and General Medicine Sections of the California Medical Association at the sixty-first annual session, Pasadena, May 2-5, 1932.

ably represent a temporary interruption of extrinsic control, a sort of local fibrillation. There may be delayed emptying (beyond seventy-two hours) or very rapid clearing. After enema the normal colon tends to retain about half its content; the irritable bowel may empty completely. In some cases with an unusual amount of mucus, thin strands of barium-covered mucus may be seen following evacuation of the bowel or after mass movements within it, the so-called "string sign."

Visualization by means of a barium meal gives a better idea of the natural tone and motor power of the intestine than an enema, although for the sake of completeness, an enema should conclude every colon study. A film twenty-four hours after the enema sometimes supplies useful information. The rate of filling by enema and the patient's reaction to it are of considerable importance in a final estimate of the case.

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DISCUSSION

R. G. TAYLOR, M. D. (1212 Shatto Street, Los Angeles).—Doctor Ruggles has given a very good exposition of this difficult and rather nebulous subject. I should simply like to emphasize that a complete study, including observations of the opaque meal, and of the opaque enema, are probably needed in most patients. Even then definite deductions of value are frequently difficult. Useful information can often be obtained where an enema only is given, by sending the patient to the toilet; then making films and fluoroscopic observation after the evacuation of the enema. The colon frequently shrinks down and gives a very markedly different appearance. Also it is important to differentiate between functional disturbances and changes and some of the lesions that cause mechanical interference with the enervation. These latter may be difficult to demonstrate. However, careful study with both meal and enema will usually show some evidence of them.

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CARL B. BOWEN, M. D. (1624 Franklin Street, Oakland).—Doctor Ruggles is to be congratulated on presenting a paper calling attention to some of the diagnostic factors in one of the most difficult and uncertain roentgen-ray examinations.

I would like to stress the importance of a complete and careful examination, making both fluoroscopic and film examinations following an opaque enema, again following evacuation of the enema, and last but not least, following insufflation of the colon, particularly in the indefinite case. It is only by such means that one can feel at all secure in his interpretation.

I would like to ask Doctor Ruggles if the commonly seen spastic colon, the small contracted colon which takes only a very small enema and shows no ulcerative change, and the smoothed-out colon seen in mucous colitis, are all the result of different degrees of the same nervous stimulation, or is each the result, at least in part, of an entirely different type of nervous stimulation? Has he ever seen a typical mucous colitis colon that either allergy or infection alone could be proved as the cause? Has he ever seen a mucous colitis colon return to a normal roentgenologic appearance following treatment? Has he seen any change in the appearance of the colon of the nervous patient following the administration of sedatives as, for example, one of the barbitol group?

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CHARLES M. RICHARDS, M. D. (303 Medico-Dental Building, San Jose).—In this paper Doctor Ruggles has given expression to observations that I am sure all radiologists have made repeatedly in the course of their examinations of colons incident to the routine roentgen gastro-intestinal examinations. Quite frequently the conclusions on those observations were the noncommittal "gastro-intestinal tract negative" based on the fact that no intrinsic pathology was found in the stomach or intestines. The conclusions were often erroneous, however, for we have failed repeatedly to suggest to the referring physician the significance of certain manifestations in the colon, particularly, which were obviously of a functional nature, and hence given scant consideration, when they might have been indicated as sign-posts pointing to a very definite pathologic process elsewhere or to a psychic or sympathetic imbalance which was causing the patient just as much suffering as though an actual pathologic process were present.

Doctor Ruggles has given us very concisely the anatomic and physiologic bases of the ability of the colon to express so many things. I am sure, did we but read the colons of our patients more exactly, they would reveal to us many leading truths that have heretofore passed unnoticed or disregarded.

I cannot help but feel that the emphasis thus placed on this subject is just one more argument for the consulting radiologist's insisting on a full clinical knowledge of the case under investigation, in order that the interpretations of his findings may be more human and hence more valuable.

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DOCTOR RUGGLES (Closing).—In answer to Doctor Bowen, I believe the markedly spastic colon represents in general a vagus preponderance, and the smoothed-out colon, usually atonic, a sympathetic hyperactivity. It is probable that all mucous colitis is a nervous manifestation, and we have seen many cases of this type become normal with a stabilization of the nervous system. In our experience, barbitol does not make so much difference in the appearance of the colon as it does in its function.

SOUTH AMERICAN TRYPANOSOMIASIS OF THE HUMAN TYPE—OCCURRENCE IN MAMMALS IN THE UNITED STATES*

By CHARLES A. KOFROID, PH. D., Sc. D.,
AND FAE DONAT, A. M.

IN 1916 Kofoid and McCulloch¹ described a trypanosome from the digestive tract of *Triatoma protracta*, the cone-nose bug, often called the kissing bug, and locally known as the China bedbug, or crossbug, because the folded wings are cruciform (see Fig. 1). These bugs live in considerable numbers in the large brush-pile nests of the wood rats (*Neotoma*), and occasionally in the subterranean nests of the meadow mice (*Microtus*), two genera of rodents widely distributed in the western United States. These bugs fly at night and are attracted to lights in houses and in camps in the open. They are blood-sucking insects which feed in the laboratory at intervals of one to three weeks, engorging the digestive tract with blood, and defecating at the site of the bite.

CONE-NOSE BUGS—HABITATS IN CALIFORNIA

These bugs in nature, collected at several localities from some but not all nests examined in San Diego County, are very heavily and very generally infected with the flagellate which was described as *Trypanosoma triatomæ*. The infection occurs in a variety of typical developmental stages, including the trypanosomal, crithidial, trypani-

* From the Zoölogical Laboratory, University of California.



Fig. 1.—*Ariatoma protracta*, Hemipteran host of *Trypanosoma cruzi* in California: A, nymphs of various sizes, some engorged with blood; B, adult male and female (natural size).

form, and spore-like phases. This indicates that the bug is a normal host, and analogy suggests that it is the insect vector of a blood-dwelling trypanosome in some vertebrate, presumably mammalian, host. The conditions of life of the bug naturally lead to the inference that this host is the wood rat, or meadow mouse, or both.

Investigations of the blood of the wood rats in nature, carried on at Berkeley in 1916 and since, have not fulfilled these expectations by bringing to light *Trypanosoma triatomæ* in their blood. On the other hand, it was found that wood rats about Berkeley do harbor generally a trypanosome in their blood. This trypanosome, on careful study, has been proved to be *T. lewisi*, the widely distributed trypanosome of the common house rat. Wood-rat nests are infested with *Ceratophyllus fasciatus*, the well known insect vector of this trypanosome of the rat.

Triatoma protracta is known to occur throughout California, as far east as Utah, and southward into Mexico. The limits of the distribution of its trypanosome infection are unknown as yet, except for its very general prevalence in bugs from certain nests of wood rats in San Diego County, and its absence in bugs from other nests and from all bugs thus far examined from the neighborhood of Berkeley. Hereditary transmission through the egg has not been found in bugs isolated from infected parents and raised in the laboratory, nor, as yet, have trypanosomes been found in young bugs reared with infected adults. We have as yet been unable to demonstrate any method whereby the trypanosome infection can be passed naturally from bug to bug, though presumably anal feeding or cannibalism might accomplish this. The intervention of a mammalian host seems on *a priori* grounds to be essential for the maintenance of the infection.

Trypanosome infections, with *Trypanosoma triatomæ* = *T. cruzi* in young uninfected nymphs of *Triatoma protracta*, have been established by feeding them upon experimentally infected albino rats whose blood at the time contained active trypanosomes (see Fig. 2).

TRYPANOSOMES—INSECT VECTORS

The method of transfer of the trypanosomes from this insect vector to the mammalian host in

nature is not as yet certainly known, and the very existence of such infections in nature in mammals of California is also as yet undetected. Possibly this failure to find them results from early infection of the young mammal and the passing of the infection into a carrier stage, with the subsequent decline of the infection to a very low level.

Experimentally we have infected an albino (Wistar) rat fifteen days old by an intraperitoneal injection in Locke's solution of the entire contents of the gut of an infected *Triatoma protracta* collected from the nest of a wood rat in San Diego County. Blood in Locke's solution from the tail of this rat, containing active trypanosomes injected intraperitoneally into a young (14 days) Wistar rat resulted in a transfer of the infection, as also citrated blood similarly injected into another young (21 days) Wistar rat. A similar injection of citrated infected blood into a half-grown Virginia opossum resulted in infection. Finally, a wood rat, a young-of-the-year, 117 days old, born in the laboratory from a mother collected near Berkeley, belonging to the subspecies *Neotoma fuscipes annectens*, was also infected by an intraperitoneal injection of citrated infected blood. Undiluted heart blood from an infected Wistar rat injected into a young Wistar rat produced an infection. The trypanosomes appear in fresh smears of tail blood in cases of successful inoculation on the sixteenth to the twenty-fourth day after inoculation, are never abundant, and disappear and recur in the peripheral blood.

Splenectomy of rats injected intraperitoneally with infected blood and examined every other day for trypanosomes in the peripheral blood, with negative results, has in several cases resulted in the appearance of *Trypanosoma cruzi* in the blood smears on the second or third day after the operation (see Galliard²).

The heart muscle (Figs. 3 and 4) is filled with nests of minute Leishman-Donovan-like bodies, among which both crithidia- and trypanosome-like stages can be found. The picture of infection in the heart muscle of the mammalian host is identical with that figured by Chagas³ in the mammalian hosts in the cases of Brazilian human trypanosomiasis.



Fig. 2.—*Trypanosoma cruzi* with red blood corpuscles from an experimentally infected albino rat. X 3924.



Fig. 3.—Developmental stages of *Trypanosoma cruzi* in heart muscle of albino rat. X 2000.

SUMMARY OF PRESENT KNOWLEDGE

The facts thus far discovered concerning this trypanosome and its host may be summarized as follows:

1. The kissing bug, or cone-nose bug (*Triatoma protracta*) has been found to be (1916, 1932) infected with a trypanosome in San Diego County. This trypanosome is identical with *Trypanosoma cruzi*, the cause of human trypanosomiasis in Brazil.

2. Infected bugs have been taken in nests of wood rats (*Neotoma fuscipes macrotis*) in San Diego County. Bugs from wood-rat nests (*Neotoma fuscipes annectens*) about Berkeley have not been found to be infected with trypanosomes, but can be infected by feeding them on infected albino rats.

3. Laboratory rats have been infected by intraperitoneal injection of the contents of the digestive tract of an infected bug and by the eating of six infected bugs, but not by the bites of infected bugs.

4. The trypanosome from California is identical with *Trypanosoma cruzi* of human Brazilian trypanosomiasis in morphology, in both the insect vector and the mammalian host, and in its attack on cardiac muscles. Its insect vector belongs to the same genus (*Triatoma*) of hemipteran bug in the two localities.

POSSIBILITIES OF HUMAN INFECTION

These facts suggest the possibility of human infection of *Trypanosoma cruzi* in western United States, as well as in Brazil. Facts favoring this suggestion are the widespread occurrence of the insect vector and of the probable mammalian reser-

voir, the wood rat. The insect vector, *Triatoma*, is known to bite man. The factors militating against human infection are (1) the limitation of the wood rat to wooded canyons and hillsides and, in general, to the uninhabited chaparral belt, and (2) the fact that not all bugs and not all wood rats are infected. Our experiments indicate that both bugs and rats from localities where infection has not been found can easily be infected experimentally. They are, therefore, potential factors in the problem of human infection.

The geographical extent of the problem of a potential human menace is involved in the distribution of wood rats and the degree to which six subspecies of *Neotoma fuscipes* are potential reservoir hosts. An additional factor is the spread of the recently introduced Virginia opossum (*Didelphis virginiana*) on the Pacific Coast. This mammal is wont to hide in the nests of wood rats. We have experimentally infected it with *Trypanosoma cruzi*, and Robertson⁴ found the trypanosome in an opossum at Tela, Honduras. It is therefore possible that this introduced opossum may also serve as a reservoir host.

The species of wood rat incriminated as a probable reservoir host is *Neotoma fuscipes*. Mammalogists distinguish six geographically isolated subspecies of this species. These are: (1) *Neotoma fuscipes fuscipes*, distributed from San Francisco Bay northward into British Columbia in the Coast Ranges; (2) *Neotoma fuscipes annectens*, which ranges from San Francisco Bay southeastwardly in the mountains to Monterey Bay and then only to the east of Salinas Valley; (3) *Neotoma fuscipes macrotis*, which ranges from Monterey Bay southeastwardly in the Coast Ranges into Lower California, but only on the west side of Salinas Valley; (4) *Neotoma fuscipes simplex*, which ranges in an arc around the southern end of the San Joaquin Valley; (5) *Neotoma fuscipes streator*, which ranges along the western slopes of the Sierras along the central valley of Cali-

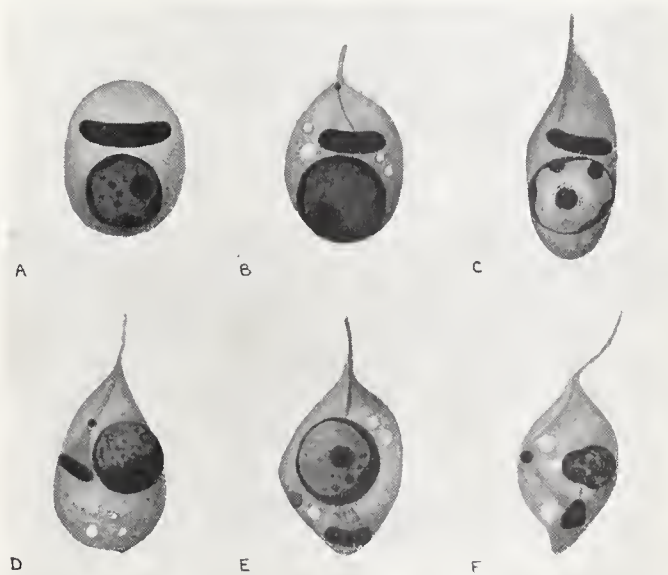


Fig. 4.—*Trypanosoma cruzi* from heart muscle of albino rat: A, leishmaniform stage; B and C, crithidial stages; D, transitional stage between crithidia and trypanosome; E and F, trypaniform stages. X 3924.

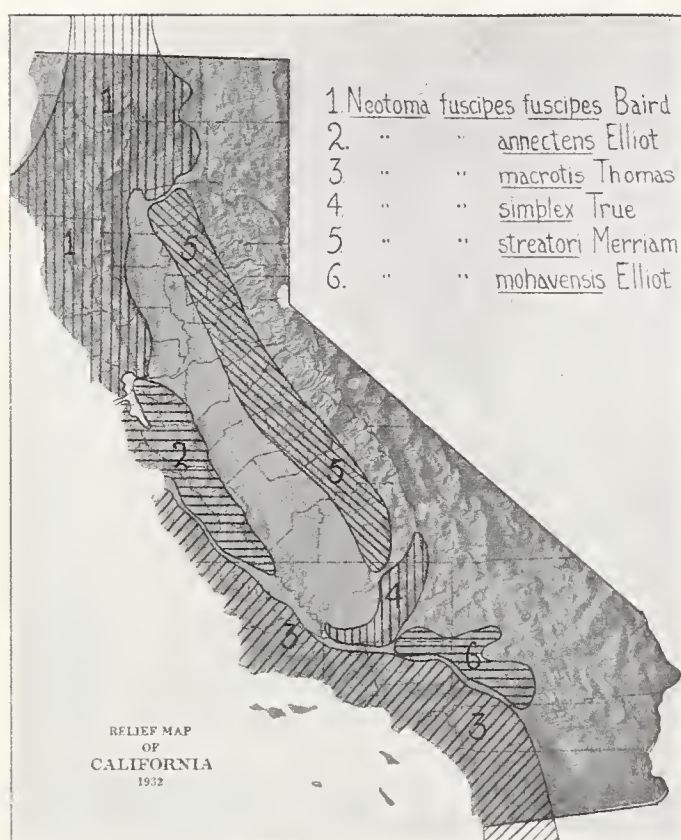


Fig. 5.—Distribution of the subspecies of the wood rat, *Neotoma fuscipes*, in California.

fornia; and (6) *Neotoma fuscipes mohavensis*, which occupies a limited territory in the Mohave Desert (see map, Fig. 5).

Of these six subspecies one only, *Neotoma fuscipes macrotis*, lives in territory where infected bugs have thus far been found. However, another subspecies, *Neotoma fuscipes annectens*, can experimentally become a reservoir host. This opens up the possibility that the other subspecies are also potential reservoirs.

The mode of infection is important in estimating the relation of this animal-borne disease to human infection. Chagas^{3,5} believed it to be transmitted by the bite of the insect vector and reports the occurrence of the flagellates in the insect vector in the anterior position, *i. e.*, in salivary glands. Brumpt⁶ is of the opinion that this anterior position is rare and accidental and that the normal position is posterior. The findings of Kofoid and McCulloch¹ in *Triatoma protracta*, the insect vector in California, support Brumpt's view. All of our controlled experimental efforts to inoculate laboratory mammals by simple biting have failed.

The posterior position (rectal and feces) in the insect vector, by inference, implies normal infection by contamination rather than by the injection of the infection in the act of biting. Our infection of a white rat which ate an infected bug supports the contaminative method. In nature and under laboratory observation the bug defecates near the site of the bite as its digestive tract fills with blood. Mammals, when thus bitten, usually bite and lick this region, and in so doing may introduce the infective stages of the trypanosome intradermally into the lesion or bring them into

contact with the mucous membranes of the mouth and thence possibly with the epithelium of the digestive tract. Trypanosomes are known to penetrate cells and tissues of mammals. In the case of Chagas'³ observations, there is no evidence that he excluded intentionally the possibility of contamination of the wound by the extruded feces of the bug. The irritation of the bite of the bug might easily lead to the rubbing of the site in man and cause the introduction of the infective stage of the trypanosome into the lesion.

SYMPTOMS

For many years these cone-nose bugs have been sent in to Professor W. B. Herms and to us by persons bitten by the bugs, or by physicians in attendance. The symptoms attendant on the bite have been attributed to the poisonous nature of the secretions discharged in the lesion, presumably from the salivary glands. To what extent, if any, the sequelae result also from the trypanosome infection introduced, questionably by the bite, more probably by contamination of the wound by rubbing into it the feces of the bug deposited near it, is as yet wholly unknown.

The Brazilian human trypanosomiasis, whose insect vector is *Triatoma megista*, occurs in an acute form mainly in very young children. The infection becomes chronic in older children up to fifteen years, and also occurs in adults. It is associated in children with retardation of development of mind and body, and with indications of involvement of heart, meninges, or brain. The trypanosome occurs sparingly in the blood and also in the cerebrospinal fluid, and can be found at autopsy in the heart muscle.

The period of incubation is from ten to thirty days. In the acute form which follows, there is fever, edema, anemia, and enlargement of the liver, spleen, and lymphatic glands. The thyroid and ovaries showed fibrosis and sclerosis, but this condition in these organs may not be due to trypanosomes.

OBJECT OF THIS PRELIMINARY PAPER

This preliminary paper is published in order that physicians attending patients bitten by "kissing bugs" may be aware of the possibility of trypanosome infection and may seek to differentiate between toxic results of the bite and an infection by trypanosomes. The writers will be pleased to examine blood smears, preferably taken over a series of days, including the tenth to the twentieth, and to examine bugs for trypanosome infections. The living bug should be sent to us if possible. Directions for the intraperitoneal infection of rats with the patient's blood will also be sent on request.

University of California.

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OBSTETRICAL ANESTHESIA—ITS PRESENT STATUS*

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THE alleviation of pain attendant upon childbirth is today a method so generally accepted and practiced that it is perhaps difficult for us now to appreciate to the full extent the efforts of the distinguished pioneers in this field, especially Simpson, in Europe, and Channing, in this country. The various means of achieving this end present an ever-widening study, and it has seemed that a review of the various methods would not be unprofitable. This paper has been written not in the hope of presenting something new, but rather in the hope of learning from our fellow workers their experiences in this field, and so adding to our practical knowledge of the subject. Pain in labor may be natural, but it is very questionable whether it is harmless. Pain under any other condition is considered symptomatic of disease. The modern woman, reared under our present culture and civilization, cannot stand such pain without some injury. Various methods to accomplish the alleviation of pain in labor have been introduced and have met with a fair degree of success, but it would seem we have not yet found the ideal method.

ALLEVIATION OF PAIN

There are certain minimum requirements which must be demanded of any procedure to eliminate pain in labor; it must be safe for mother and child; it must be efficient in abolishing pain; and if it is to have widespread use it should not be complicated. The busy obstetrician or anesthetist is not able to devote his entire time to each patient, and therefore some of the supervision must be left to subordinates. Each patient must be considered individually; one method alone will not answer for every case, but a combination of methods may give better results. Another requirement which many obstetricians insist upon is that the patient be able actively and voluntarily to cooperate during the second stage. A fact also to be remembered is that any drug or agent that is given the

mother will to some extent be passed over to the child. The investigations of Jung¹ have shown this very conclusively.

DRUGS AND AGENTS USED

Among the drugs and agents used to alleviate the pain in labor are: chloroform, ether, nitrous oxid, ethylene, morphin, scopolamin, magnesium sulphate, the barbiturates, avertin, novocain by local infiltration, sacral or spinal anesthesia.

Rucker² states that all anesthetics and analgesics have a greater or less tendency to quiet uterine contractions. The analgesics, in this regard, he ranks in the following order: paraldehyd, magnesium sulphate, morphin, bromid and chloral. The general anesthetics he places in the following order: chloroform, ether, nitrous oxid and ethylene. He also claims that scopolamin usually increases the force of uterine contractions; and that novocain, in sacral anesthesia, has an inhibitory or a stimulating effect, according to whether adrenalin is used with it or not.

The use of chloroform and ether is still widespread, though chloroform is not used nearly to the same extent as formerly; and, considering the reports of injurious after-effects on the child, it is difficult to understand why it is used at all. It is doubtful whether, in the proper administration of either, the mother received sufficient to cause harm to herself; but, though probably not as efficient as chloroform in relieving pain, ether undoubtedly is the safer of the two, both to mother and child. However, it is comparatively slow in its action, and in obtaining its analgesic action the coöperation of the mother is apt to be lost.

GWATHMEY METHOD

In 1923, Gwathmey³ introduced ether-oil-quinin colonic instillation combined with morphin and magnesium sulphate to produce analgesia in labor, and its use is at the present time widespread. Basing conclusions on a review of twenty thousand cases, he and Davis⁴ find that all drugs used at the time given and in the prescribed dosage are safe to both mother and child; that while analgesia is the fundamental factor in this method, amnesia is also frequently present; that 90 per cent of patients obtain some relief, the greater percentage a great deal; that it may be used as easily in the home as in the hospital; that it is inexpensive and does not require an especially trained person to administer it; and that the obstetrician does not have to be present continually throughout labor. It does not prolong labor, even in cases of bad position or presentation. Vomiting is not more frequent than without analgesia; the perineal muscles are well relaxed; patients are quieter and undergo less strain and consequently are in better condition next day. A small percentage of patients show marked excitement, but not to the extent of requiring forcible restraint. The only contraindications are colitis, diabetes, and auditory disturbances. It is not contraindicated in cardiac cases, toxemias, or placenta praevia that have been permitted to go into labor; asphyxia, postpartum hemorrhage, and stillbirths are not more frequent than if this method had not been used.

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Pettit⁵ considers the Gwathmey method very valuable and uses it in practically all cases except very rapid labors, using N_2O-O at the terminal stage. He reports no untoward effects either in mother or child.

Emge,⁶ in summarizing his observations on a series of two hundred cases, concludes that it is a distinct advance in relieving the suffering of labor. Its applicability in his hands was practically limited to primiparae and those labors which were long and difficult. The serious drawback that he found was the increased fetal anesthesia, which was frequent and at times serious.

Stephenson⁷ considers the method valuable in primiparae in slow labors in tiding them over to the second stage, where the effect of chloral or morphin, given in the first stage, has not been sufficient to carry them that far.

The resident in obstetrics at Stanford Hospital tells the writer that, on the clinic side, the method has been used extensively, particularly in primiparae, using N_2O-O at the terminal stage with very satisfactory results.

Many obstetricians do not agree that the method is as simple as is claimed, and object to the delayed labors, lack of coöperation on the part of the patient, increased forceps deliveries, the rectal irritations, and the fetal anesthesia.

MORPHIN

The chief danger in the use of morphin lies in its depression of the child's respiration and it should not be administered within three or four hours of expected delivery. De Lee⁸ considers morphin indispensable in obstetrics, being superior to chloral and the barbiturates; not to be used routinely, however, but as indicated, particularly in carrying primiparae throughout a prolonged first stage, thereby giving rest to the mother while not endangering the child.

MAGNESIUM SULPHATE

Magnesium sulphate has long been known as a sedative and analgesic. Gwathmey³ has maintained that morphin and magnesium sulphate are synergistic. Beckman⁹ states that there is no such action between the two. At any rate, the dose usually employed two cubic centimeters of a 50 per cent solution, is harmless, but the morphin used with it may endanger the child.

TWILIGHT SLEEP

"Twilight sleep," first used by Steinbrickel in 1902, employed as active agents morphin and scopolamin. Its original popularity has largely disappeared, due to failure in obtaining analgesia in many cases, to unmanageable patients, prolonged labors, and to narcotized babies. Constant supervision by the physician was necessary, and the coöperation of the patient could not be expected.

SCOPOLAMIN

According to Sollman,¹⁰ scopolamin in therapeutic doses causes practically no change in respiration or blood pressure, while toxic doses depress respiration, heart, and blood pressure. The combination with morphin increases not only the nar-

cotic action but also the depression of respiration, and this in an irregular degree. According to experiments done at the Washington University Medical School,¹¹ scopolamin, alone, "in doses larger than recommended in 'twilight sleep' has no material effect on blood pressure or respiration." Scopolamin during the first stage, and in one or two small doses, is used by some obstetricians, supplementing this by some inhalation anesthetic during the second and third stage. Van Hoosen,¹² in reviewing some two thousand cases, shows excellent results with scopolamin as the anesthetic, but considers the use of morphin with it a decided disadvantage and a real danger. She states the disadvantages are that it requires thirty to forty minutes for the scopolamin to become effective and that the patient may become restless and require restraint and is not amenable to suggestion. The advantages are the shortening of labor, less postpartum bleeding, increased uterine activity, with the patient oblivious to her surroundings, and may be safely prolonged for any delivery.

Beckman⁹ has stated that magnesium sulphate and scopolamin are synergistic. Fist¹³ has obtained very satisfactory analgesia with this combination, with an inhalation anesthesia for the perineal stage, if necessary. He reports elimination of pain, a patient tractable and able to coöperate, and no decrease in the force of uterine contractions or ill effects on the child. Magnesium sulphate would seem to eliminate the restlessness sometimes seen from scopolamin alone.

Krebs¹¹ uses scopolamin and morphin seminarcosis in the first stage, especially in primiparae, or in any prolonged labor. He reports some restlessness and excitement, but no increase in the infant mortality, but rather a decrease. An inhalation anesthetic was used in the terminal stage.

AVERTIN

Avertin, or tribromethanol, has been used more extensively abroad, in obstetrics, than in this country, though its use here would seem to be increasing. It is recommended¹⁴ that the dose be 60 milligrams per kilo of body weight, in a two and one-half per cent solution, preceded by a hypodermic injection of morphin, one-sixth to one-quarter grain one-half to one hour previous to the instillation. The instillation of the avertin is given when the head is below the pelvic brim and the cervix fully dilated, the effect being established in about fifteen minutes and lasting for from one to two hours. A second and smaller dose, 20 to 30 milligrams per kilo, can be given if delivery has not been accomplished before the effect of the first has worn off. Uterine contractions may be less frequent and slightly diminished in force. Small amounts of a supplemental anesthetic are usually required for the third stage and for repair.

Reed¹⁵ found that changes in pulse, blood pressure, and respiration did not differ materially from those ordinarily due to uterine activity alone. He concludes that avertin relieves the pains of labor without interfering with uterine contractions and is safe to both mother and child.

Wall¹⁶ noted that the amnesic effect lasted much longer than the analgesic.

Pierce¹⁷ found that, while the majority of labors were painless, there were some patients who became markedly excited and even uncontrollable.

Avertin is contraindicated in disease of the liver, colon, and kidney, and in thyroid deficiency.

NOVOCAIN

The local use of novocain for infiltration of the cervix or of the perineal body and levators has been employed by some.¹⁸ Many obstetricians feel the method to be uncertain and a probable source of infection.

Sacral anesthesia has also been used to a certain extent. Rucker¹⁹ and Oldham²⁰ report successful anesthesia in 85 per cent of selected cases. It gives excellent relaxation, the patient is able to cooperate, and it is a fairly safe procedure. The blood pressure should be watched closely. Novocain, used without adrenalin, causes no change in uterine contractions. Spinal anesthesia has been used to some extent in labor. The same dangers and contraindications are present here as in surgery. Cosgrove²¹ has used it with success in selected cases. Ephedrin is given before to counteract the fall in blood pressure, and pituitrin after to stimulate contractions, as labor is practically arrested by the spinal injection. There is complete anesthesia, with good relaxation and cooperation of the mother.

In neither sacral nor spinal anesthesia was there any deleterious effect upon the child. Neither is applicable to the first stage.

BARBITURATES

Recently the barbiturates, particularly sodium amytal, have been employed as an analgesic, usually with some other agent, in obstetrics. The action of the barbitals is hypnotic, sedative and antispasmodic. They are mildly analgesic and only in large and toxic doses are they anesthetic. The pharmacologic basis for their use is a prompt and lasting central depression, the lasting effects due to their slow elimination. The barbitals would seem to eliminate the appreciation of impulses from the external world and also tend to cut off the central inhibitory impulses, which may account for the excitation seen at times following their administration. Barbitol in therapeutic doses does not materially affect circulation or respiration. Hanzlik²² states that the degree of alkalinity to dissolve the barbituric acids is greater than that possible in the blood or tissues and that after intravenous injection they are precipitated, or exist in some colloidal state in the body, and that therefore such use is dangerous. He states that the efficiency of the various barbituric derivatives varies directly with their toxicity and that the margin of safety in therapeutic doses has not been amplified by the increase of the activity of the derivatives.

The Council on Pharmacy of the American Medical Association²³ does not consider there is any advantage in their intravenous use over the oral, and considers it unjustifiable to so use them.

It gives the disadvantages of such use in obstetrics as danger of asphyxiation of the child, restlessness of the mother, prolonged anesthetic state with absence of protective reflexes, lack of the patient's cooperation, and danger of pulmonary congestion and edema.

De Lee⁸ has expressed himself as dissatisfied as to the effect of sodium amytal and reports several narcotized babies. Stephenson⁷ had unsatisfactory results with its use, particularly excitability in the mother and apnea in the child.

Hamblen and Hamblin²⁴ used sodium amytal as the sole anesthetic agent by oral administration and concluded that the depth of narcosis depended rather on the dose than on the method of administration; that labor was not prolonged nor instrumental interference increased; there was no increase in postpartum bleeding or ill effects on the child. Amnesia and moderate analgesia were obtained in the vast majority of cases, but anesthesia could not be relied upon. Marked variations of susceptibility occur and there may be definite idiosyncrasies. Restlessness was the greatest drawback. There was no cooperation on the part of the patient.

Massey²⁵ used sodium amytal intravenously and his conclusions are much the same as Hamblen's. He warns that blood pressure and respiration must be watched closely, and insists on a careful and cautious use of the drug and that the patient must be watched at all times.

Swendson²⁶ with this method, obtained amnesia in 90 per cent of cases, but found restlessness to be the objectionable feature of the procedure, and that a third of the babies were apneic, requiring stimulation.

Cohen,²⁷ and also Bristol,²⁷ recommended a moderate dose of sodium amytal by mouth, with a 1/200 grain of scopolamin early in labor, repeating this if necessary, and conducting the second stage with N₂O-O. They state it can be given earlier than morphin and gives amnesia in the majority of cases. Labor is not slowed and there are no ill effects on the child and the mother sleeps several hours after delivery.

Pernocton, a brombarbiturate for intravenous use, has been used by Brown, Maloy, and Laird.²⁸ Relief of pain and amnesia were obtained in nearly all of the cases. There were occasional varying degrees of excitement. Eight per cent of the babies required stimulation to start respiration.

Rudolph Kobes²⁹ agrees that pernocton is useful as an analgesic in labor, but reports many deeply narcotized babies.

Axelrod³⁰ has combined the barbiturates, nembutal, and neonal with the ether-oil-quinin rectal instillation and reports uniformly good results. Restlessness may develop, but amnesia was always present and there were no ill effects to mother or child.

NITROUS OXID, OXYGEN, AND ETHYLENE

The use of nitrous oxid and oxygen came into more or less general use in obtaining analgesia and anesthesia in labor in 1914 or 1915, Webster, Lynch, and Davis calling particular attention to this method. They pointed out that a few breaths

of this mixture given at the beginning of a contraction gave the same type of analgesia as chloroform, that it stimulated rather than diminished the force of the contraction and, in correct proportion, there was no injurious effect on either mother or child. At that time it was thought that it could be administered indefinitely, but later it was considered better not to administer it over three hours, though the writer has never noted any ill effects when that length of time was exceeded. Nitrous oxid is absorbed rapidly into the blood, forming a very loose combination with it, and is as rapidly eliminated. It would seem to have no deleterious effects on any of the body tissues. Nitrous oxid causes death only by asphyxia, which is impossible with the mixture containing sufficient oxygen, as it must in obstetrical work. Its use does not delay labor, and often would seem to hasten it by stimulating the contractions and by allowing the mother to use her voluntary muscles in the expulsion of the child without pain.

Practically all that has been said about nitrous oxid will also apply to ethylene, except that higher percentages of oxygen can and should be used with it, and that it gives more relaxation. Ethylene has a disagreeable odor and is highly explosive; on that account its use has been given up by some obstetricians and hospitals.

Since 1917, N_2O-O analgesia has been used at Stanford Hospital for the alleviation of pain in labor, and it is this method that the writer is particularly familiar with. The administration is started late in the first or at the beginning of the second stage, depending on the rapidity of labor. Whatever medication is given during the first stage will depend upon the obstetrician's personal feeling and upon the progress of labor and the discomfort of the patient. Many multiparae, and some primiparae, require nothing up to the time of administering the gas. Chloral and bromid, morphin, or, less frequently, ether-oil rectal instillation (the last being used more frequently on the clinic side than on the private) may be used. The writer thinks there has been no use of scopolamin or the barbiturates. Those patients having "Gwathmey" are apt to be uncoöperative during the administration of N_2O in the second stage. The mixture used will depend on the reaction and needs of the patient. A large percentage seem to do very well with 15 or 20 per cent oxygen from the start. In case of almost continuous and severe pains analgesia may be continuous. At the third stage, or in case of instrumental delivery, the analgesia is deepened to anesthesia. At this point it may be necessary to supplement the N_2O with ether. The amount is usually small, and we have never been able to see any deleterious effects to either mother or child. We have insisted on the avoidance of any cyanosis in the mother, preferring to add ether than to crowd the gas. Coöperation of the patient is very necessary to the success of N_2O analgesia, and it is important that in the intermittent administration the patient does not become anesthetized. This can be avoided by adding oxygen though, for a patient to drift off to sleep between pains is rather beneficial than harm-

ful. The majority of patients coöperate well, and failure to do so is usually due to inability to understand the directions, unpleasant effects from N_2O-O , and in some cases to the innate perversity of the human race. During the administration the patient should be encouraged and commended for her efforts and reassured as to the progress. We have felt that labor has been but rarely delayed, if at all; often that it has been hastened. Postpartum hemorrhage has not been increased. We have not seen that stillbirths are more frequent with this method than without, nor have we been able to attribute any of these to the effect of N_2O-O . As a precautionary measure against asphyxia, we have administered 100 per cent oxygen to the mother as the shoulders were being delivered, and feel that this has been very beneficial. We have not felt that asphyxia has been due to N_2O , combined with the amount of oxygen that we use, but rather to prolonged labor, undue pressure on the child, difficult deliveries, and the various accidents that may happen during labor. We have obtained satisfactory analgesia in more than 95 per cent of cases. After a survey of some three thousand cases, we feel that this method is very efficient in abolishing pain and in allowing the mother to coöperate actively and that it is very safe to both mother and child.

RESUSCITATION

As the anesthetist, as one of an obstetrical unit, is being called upon more and more to aid in the resuscitation of the new-born, a few words on this subject may not be amiss. The degree of asphyxia in the new-born may vary from a slight depression of respiration and circulation to the extreme degree where there is no respiration, very depressed circulation with absence of reflexes and muscle tone. Active and rhythmic respiration in the new-born is not established unless the respiratory apparatus and the respiratory center present anatomic integrity. Both the respiratory apparatus and the respiratory center must be considered in asphyxia neonatorum. The causes producing asphyxia may be a long labor, with hard contractions, atelectasis, the effect of drugs, long-continued pressure on the head, intracranial injuries, or premature separation of the placenta. Drugs as stimulants to respiration in the new-born would seem to be without value.³¹ As shown, particularly by Henderson,³² CO_2 is the physiologic stimulant of the respiratory center. Waters³³ has shown that there is a tendency to fetal anoxemia during labor and that the respiratory center of the fetus tends to be depressed, and a CO_2 tension above normal is desirable. The anoxemia can be avoided by the mother's breathing an oxygen-rich atmosphere, and the CO_2 content can be kept up by intermittent rebreathing until the mouth is delivered.

Coryllos³⁴ has shown that the lung of the new-born is in a state of collapse and, with the first breath, does not expand entirely and may not reach its full expansion for some days. Persistent atelectasis, complete or partial, is due to bronchial obstruction, and if not relieved results in immediate or delayed asphyxia and predisposes to pulmonary infections.

Whatever the cause of this condition, the first thing to be done is to insure that the respiratory apparatus is free from obstruction. The mouth, pharynx, and trachea must be cleared of fluid by gentle wiping, suction, or by gravity. Flagg³⁵ recommends the use of the laryngoscope and suction, even using suction in the trachea, if necessary. The actual condition of the child, indicated by the heart action, muscle tone and reflexes, is the guide to the treatment required. The vigorous manual methods have lost much of their former popularity, and undoubtedly have often caused injury and defeated their own purpose. The mildly depressed baby that responds readily to stimulation responds readily to a few cold breaths against the body, gentle rubbing, or a sharp spank. The deeper-asphyxiated child, breathing occasionally on external stimulation but with the reflex tone of the glottis active, responds readily to O-CO₂. The child with loss of reflex and muscle tone and poor heart action requires immediate clearing of the mouth, pharynx, and trachea by whatever method, and insufflation of CO₂, 5 to 7 per cent, with oxygen, as recommended by Henderson, by bag and face mask or directly into the trachea by the laryngoscope under pressure of 15 to 20 millimeters, as recommended by Flagg, and continued until there is no evidence of heart action. Also the child should at all times be kept warm. Any apparatus for insufflating the lungs should be provided with escape valve that will blow off at 15 to 20 millimeters pressure. Any overpressure may cause rupture of the alveoli, which is one disadvantage of the mouth-to-mouth method, which, though empiric, is useful if done gently. In persistent absence of respiration, as in cerebral hemorrhage or when due to drugs, the Drinker respirator may prove of value. It does not, however, take into consideration the necessity of getting CO₂ to the baby. Murphy,³⁶ in a study of a series of cases, considers it the most valuable means of resuscitation. Others have totally disagreed with this view, considering it ineffectual or even harmful, especially when the baby is trying to breathe and will not synchronize its breathing with the machine.

Asphyxia neonatorum is a condition that must always be anticipated. The condition must be treated as indications require. The simpler the method, provided it is effective, the better. Everyone will possibly differ as to the means of artificial respiration, but whatever method is used, gentleness is essential and avoidance of injury to the body or organs of the child. If the writer may quote Henderson:³² "Resuscitation of the newborn child should be based on the modern conception of the regulation of respiration by the action of the blood gases on the respiratory center. Oxygen is not a stimulant, but a food. Deficiency of oxygen, beyond a first slight stimulating effect, depresses the nerve centers. In the absence of oxygen, the tissues of the body cannot produce CO₂. It is the CO₂ carried by the blood from the tissues to the brain that is the physiologic stimulant to respiration. When the respiratory center is depressed, it requires more than the normal amount of this stimulant to induce activity."

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DISCUSSION

WILLIAM W. HUTCHINSON, M. D. (1930 Wilshire Boulevard, Los Angeles).—The author has given us a brief outline of the various methods used in present-day obstetrical analgesia. There are two, and only two, considerations in obstetrical analgesia and anesthesia: (1) alleviation of the mother's pain with the least possible danger; and (2) safety of the child.

To safeguard these two factors to the greatest degree the agent or agents used must have flexibility, and be subject to immediate and complete control by the obstetrician or anesthetist at all times. Any drug given intravenously, by hypodermic injection, rectally, or even orally, is beyond the control of the one who administers it and, while drugs given by these methods may at times be indicated and often give spectacular results, I do not feel that they are protecting mother and child to the greatest possible degree and that they are without danger.

Many of the agents which have been advanced in the past few years, each being claimed by its adherents as the acme of perfection, are to a great degree hypnotic drugs and have only very slight analgesic and, in safe dosage, even less pronounced anesthetic properties. These drugs to a great extent obliterate cerebral control and the obstetrician, under these circumstances, loses one of his greatest assets—the coöperation of the mother. While she may be amnesic, the painful stimuli are transmitted and instead of producing coördinated effort, energy is often wasted on ineffectual muscular exertion which is detrimental to both mother and child.

I, personally, am inclined to agree with Doctor Burrows, and feel that nitrous oxid-oxygen analgesia is probably the safest and most flexible obstetrical analgesia we have at the present time. It can be controlled at all times, can be carried down during contractions and discontinued between pains with rapid elimination or deepened to complete anesthesia, with possibly the addition of a small amount of ether for the actual delivery, and by giving an excess of oxygen as the head and shoulders are delivered, resuscitation of the new-born is rarely required.

The ideal in analgesia and anesthesia, obstetrical or surgical, has not been produced and it is my hope that investigators will continue to search for better agents than we at present possess, but I am of the opinion that we sometimes err in being too prone to accept the new before it is proved beyond a reasonable doubt to be superior to the older and established methods.



DOROTHY A. WOOD, M. D. (1390 Seventh Avenue, San Francisco).—Doctor Burrows has given an excellent résumé of the various methods in use for the relief of obstetrical pain. I agree with him in feeling that nitrous oxid-oxygen analgesia and anesthesia are the safest for mother and child and give the best results of any known agent in the later and more painful stages. At the time of delivery or during repair, if relaxation is not all that is desired, a small amount of ether may be added. During the early stages of prolonged labor, I have seen a few patients very well controlled with a small oral dose of sodium amytal. In these particular patients labor pains did not seem to be diminished, the patients were not too much narcotized and they were able to do as they were told and worked with their pains, with the addition of N₂O-O analgesia in the later stages. The next day they retained only a very hazy memory of the events in the delivery room. To me this seemed a very ideal handling of a patient in labor, but I wish to repeat that these were only a very few cases and no hasty conclusions should be drawn.



H. A. THOMPSON, M. D. (907 Medico-Dental Building, San Diego).—I must say I feel that our safest and most satisfactory method depends on the use of

nitrous oxid or ethylene, which I prefer with oxygen. I think we all agree on the toxicity of chloroform, both for the mother and baby. I have found the use of scopolamin very uncertain, and in the later stages I feel the use of morphin gives us too many babies requiring resuscitation.

I agree with Doctor Wood that moderate doses of sodium amytal, followed by gas and oxygen in the later stages, may be very satisfactory. The larger doses of sodium amytal have proved to be so depressing on the respirations of some patients that I am afraid of them.

I prefer ethylene to nitrous oxid, as I think we get a quicker and better relaxation when needed, and it often is very desirable when contractions become rapidly more severe at the time of delivery. When given with a high percentage of oxygen our patients do not complain of the odor and I believe, in hospital work, with the observance of proper precautions, there is little or no danger of explosion. We have used it over several years' time and have found no reason to abandon it.

MEASLES—ITS PROPHYLACTIC TREATMENT WITH THE BLOOD OF IMMUNE PERSONS*

By CLIFFORD SWEET, M. D.
Oakland

DISCUSSION by J. R. Jimerson, M. D., Long Beach; William M. Happ, M. D., Los Angeles; H. E. Thelander, M. D., San Francisco; Andrew J. Thornton, M. D., San Diego.

MEASLES has long been known to be a dangerous disease. Among aboriginal peoples, who have not developed any racial immunity, the mortality is very high. Individual immunity is rare except as it is conferred by the disease or by injection of immune serum. Hermann in Abt's "Pediatrics"¹ states that approximately three per cent of all individuals are naturally immune. The morbidity during an epidemic is approximately determined by the number of nonimmune persons who come in contact with another who has the disease.

IMMUNITY

The immunity produced by an attack of measles is generally lifelong, so that usually the patient who says he has had the disease two or three times is mistaken. However, that the rule of immunity after an attack is not absolute may be indicated by the number of young adults who had measles while in cantonments during the World War. Most of these men with whom I talked were certain that they had measles during childhood. Nevertheless they had severe attacks with many severe complications, so that measles was preceded only by influenza in the list of death-dealing diseases among American troops. In spite of these facts the degree of immunity following an attack must be a very high one since such a small amount of the serum (10 to 20 cubic centimeters) or of the whole blood (20 to 30 cubic centimeters) will protect a nonimmune person wholly or in large part many years after the donor has had the disease.

* Read before the Pediatric Section of the California Medical Association at the sixty-first annual session, Pasadena, May 2-5, 1932.

MEASLES A GRAVE DISEASE

Even among perfectly healthy children an attack of measles cannot be considered without some fears concerning the outcome. In this country nearly ten thousand deaths are reported annually, while Debre² and Joannon² of France have reported measles as the leading cause of child mortality during the first ten years of this century. During this period one million deaths were reported in the principal countries of Europe.

There are often important reasons for protecting a child from an attack of measles. Congenital immunity lasts from five to eight months, but cannot be depended upon to outlast the first five months of life. The largest number of deaths from measles occur under two years of age (55.3 per cent) and the next largest (31.5 per cent) during the second year. After the third year the mortality rate declines rapidly, although nearly 90 per cent of all deaths occur in the first ten years.

Poor physical condition; acute illness at the time of exposure; proved or suspected latent, recently healed or active foci of tuberculosis are among additional reasons for avoiding, if possible, the brunt of an attack of measles.

In 1917 Tunncliffe² described a diplococcus from the blood of measles patients which was found with great regularity. Later, Tunncliffe reported 105 persons inoculated with immune goat serum who had a negative history of measles. Her summary is as follows: (1) Goats have been immunized with green-producing measles diplococci and their filtrates, and an antibacterial and antitoxic serum was produced. (2) From four to six cubic centimeters of immune goat serum was given to children one year or older and to a few nurses with a negative history of measles after definite exposure. All persons who did not receive serum and all who received serum five days or more after the exposure developed measles. Goat serum prevented measles in 45 per cent of persons who received serum on the fourth day after contact with measles patients and in 97 per cent of those who received it within the first three days after exposure. (3) All infants under one year of age who received serum later than the fourth day after exposure developed measles. Ninety-eight per cent of infants given serum within the first four days after exposure failed to show any signs of the disease. (4) Reactions to the goat serum were observed in 12 per cent of those injected. (5) Although the duration of passive immunity with immune goat serum, as with human convalescent serum, is only a few weeks, the serum appears to be useful in preventing measles in very young and sick children, and in stopping epidemics in institutions where the inconvenience of an epidemic is great and the mortality may be high.

In 1921 Di Cristina of Italy announced that he had obtained from scarlet fever and measles cases minute anaërobic diplococci which grew in an unusual manner in special media. Corona joined in the investigations later. Probably the most notable aspect of the work of Corona and

his associates is the production of the antimorbillous vaccine with which they claim they have produced both active and passive immunization.

CONVALESCENT SERUM

Berney³ summarizes the earlier use of convalescent serum as follows: As early as 1896, convalescent measles serum was used therapeutically by Weisbecker in Germany; and Leydens, Huber, and Blumenthal treated a small series of measles cases in 1897. For prophylaxis, however, Cenci was the first one to use convalescent serum in 1901. In 1916, Nicolle and Conserl, two French physicians practicing in Tunis, successfully used the convalescent serum in the prophylaxis of measles. They published their report in 1918. The same year Park and Zingher used it in forty-one very recently exposed children at the Metropolitan Hospital. Twenty of these children received eight cubic centimeters of the serum and none of them developed measles. Twenty-one received four cubic centimeters and three developed the disease—one on the fifteenth day, one on the seventeenth day, and one on the twenty-fifth day after the serum was given. Richardson and Connor some time later produced passive immunization in fourteen persons with complete success.

It was not, however, until Degkwitz, working in 1919 in Munich, published his results in 1920 that large series of cases were reported and interest began to be manifested in the convalescent serum. In his first account he reported a series of over seven hundred patients successfully inoculated for passive immunization. During the following three years he successfully immunized five thousand children by his method. The results were very favorable, and in the small percentage in which the disease was not prevented it was much lessened in time and severity, and complications practically did not occur.

The method, as carried out by Degkwitz, is the sterile collection of blood seven to nine days after defervescence. He allows it to clot and uses the serum intramuscularly after sterility and Wassermann tests have been done. The serums are pooled and kept on ice with one minim of five per cent phenol added to every 40 cubic centimeters of serum. He established a system of dosage by calculating what he termed the "unit dose," which is from 2.5 to 3 cubic centimeters of mixed serum given before the fourth day of incubation, which is sufficient to protect a child up to the age of fourteen years. If serum from a single donor is used, at least 4 to 7 cubic centimeters must be used. The lower dosage is given only when the serum has been pooled from a number of donors. Injections made on the fifth or sixth day require two units (5 to 6 cubic centimeters) for protection, while on the seventh day the results are uncertain, and on the eighth day, or thereafter, they have no effect on immunity. If smaller doses are given early, passive immunity is not produced, but a mild case of measles results, lessened in virulence and course, the child usually having fever for only twenty-four hours and without the occurrence of any complications. (This modified attack produces active immunity, which is the more valu-

able, except perhaps in institutions where the desire is to stamp out the epidemic at the earliest possible moment.)

Forbes and Berryman⁴ used whole blood from a family donor, withdrawn on the first or second day after the temperature fell to normal. In this manner the younger children in a family were protected on the fifth or sixth day after exposure by 6 to 12 cubic centimeters of whole blood injected intramuscularly. Eighty-five per cent of their cases developed modified measles without complications. They used small doses in order to produce modified measles with permanent immunity rather than complete protection with immunity for a short time only.

ADULT SERUM AND WHOLE BLOOD

Degkwitz was also among the first to use blood serum from parents who had previously had measles. His results were such that he discontinued this practice, but others have persisted in it.

Von Torday reported 116 injections of adult serum, 20 cubic centimeters being given on the second to the sixth day following exposure, with failure to obtain protection in only twelve cases, and the measles that resulted in these cases was mild and attenuated.

Salomon used adult serum (from 10 to 15 cubic centimeters) for prophylactic purposes in seventy-six infants, but in only half the cases was it successful. Kutter used adult serum in fifteen children (from 6 to 15 cubic centimeters) on the fourth day of the incubation with only one failure. Gerlach used it with success in doses of from 20 to 30 cubic centimeters, the whole defibrinated mass being taken. Goebel observed that inoculation with adult blood caused only one failure in twenty-two cases in which he tried it. Zingher⁵ notes that a modified measles can be produced by the intramuscular injections of whole blood or serum from adults; 10 cubic centimeters of serum should be used, and if whole blood this amount (20 cubic centimeters) should be doubled. Zingher does not report any cases in which this method was used. Debre and his coworkers were successful in using adult whole blood. Hilsinger injected 20 cubic centimeters of adult blood into sixty persons from one to fourteen years of age. It was injected intragluteally, either directly or after 10 per cent of a 3 per cent sodium citrate solution was added. As a rule, ten escaped, twenty had the disease mildly, eighteen had regular measles, five had the disease severely, six had the

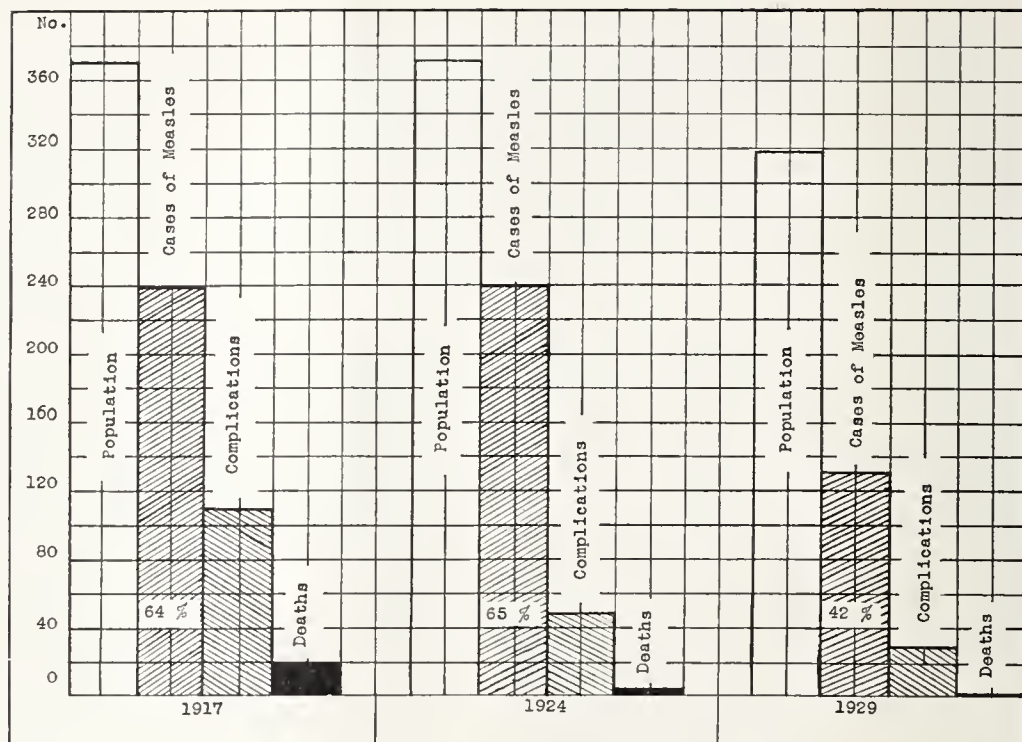


Chart 1.—A comparison of the end results of three epidemics of measles which occurred in the institution during the years 1917, 1924 and 1929. 1917—untreated. 1924—treated during active stage of disease. 1929—active as well as prophylactic treatment. After Barenberg, J. A. M. A., July 5, 1930.

disease severely with complications, and one of the patients died. Kovacs reported thirty-nine cases in which thirty-five of the patients escaped, three had abortive measles, and one had definite but mild measles.

Karelitz and Levin⁶ reported fourteen cases in which adult blood or serum was given for the prevention of measles. The whole blood was given intravenously, the serum by intramuscular injection. Of these fourteen patients, three developed measles, two of the cases being in modified form, and one a moderately severe attack with prolonged incubation.

Bivings⁷ reports the use of adult blood serum (from 6 to 25 cubic centimeters, depending on the age) for the prophylaxis against measles or the production of modified measles in children exposed to the disease. In his preliminary report he cites nine cases, three in which the disease was escaped and six in which it was mild. In a later series Bivings and Dickson report that twenty-three children were given adult blood serum following definite exposure. Eleven of these developed a very mild form of the disease, and twelve did not have any symptoms of measles.

Pasani-Casa injected from 30 to 40 cubic centimeters of the whole blood for the control of an epidemic in the Padua pediatric clinic as well as in private practice. He used, in addition, the blood of older brothers and sisters who had previously had measles. His material included thirty-three cases; fifteen of the patients obtained complete protection, seven had abortive forms without eruption, ten had extremely attenuated measles, and one had ordinary measles. There was no post-morbillar complication in any of the cases, and no death. On the basis of this experience, he credits this method with evident practical value,

TABLE 1.—*Whole Convalescent Blood as Prophylactic Treatment of Measles*

Name	Whole Blood	Donor	Donor's Measles	Exposed	Date Injected	Incubation Period	Result
G. B.	30 c. c.	Mother	20 years	Brother 4-23-30	4-26-30	17 days	Very mild, scarcely recognizable measles
J. B.	25 c. c.	Mother	22 years	Sister 4-30-30	5-2-30	14 days	Mild measles; little cough; fever 101 one day; Koplik +
S. B.	20 c. c.	Mother	22 years	Sister 4-30-30	5-2-30	15 days	Not seen; mother reported very mild measles
C. A.	60 c. c.	Brother	3 years	Sister 6-4-30	6-5-30	.....	No measles; patient in bed with infiltrative pulmonary tuberculosis
R. A.	30 c. c.	Mother	24 years	Playmate	.....	.....	No measles
D. C.	30 c. c.	Mother	20 years	Playmate 4-7-31	4-10-31	15 days	Not seen; mother reported very mild measles
J. T.	30 c. c.	Mother	18 years	Playmate 3-7-31	3-11-31	.....	No measles; 18 months of age
C. C.	30 c. c.	Mother	20 years	Playmate 4-28-31	4-30-31	12 days	Mild measles; fever 103 one day, 102 one day; Koplik + (Dr. A. J. Scott)
B. B.	30 c. c.	Mother	25 years	Playmate	4-25-31	15 days	Exact date of exposure not known; mild measles; fever 101
M. T.	30 c. c.	Mother	23 years	Brother 4-16-31	4-19-31	12 days	Not seen; mother reported severe measles
J. C.	30 c. c.	Mother	19 years	Playmate 5-18-31	5-23-31	.....	No measles; patient six months of age
E. M.	30 c. c.	.....	.....	Playmate intimate exposure	5-18-31	.....	No measles
L. M.	30 c. c.	.....	.....	Playmate intimate exposure	5-18-31	.....	No measles
M. S.	30 c. c.	.....	.....	5-16-31	5-20-31	.....	Record lost
R. S.	30 c. c.	Mother	20 years	5-4-31	5-9-31	6 days	Very mild measles; fever one day
F. S.	30 c. c.	Mother	20 years	5-4-31	5-9-31	6 days	Very mild measles; fever two days
M. B.	30 c. c.	Mother	21 years	Playmate 6-26-31	6-29-31	.....	No measles
S. B.	25 c. c.	Mother	21 years	Playmate 6-26-31	6-29-31	.....	No measles
S. E.	30 c. c.	Mother	23 years	Sister 5-20-30	5-23-30	18 days	Very mild measles; few macules on face; mild fever two days; Koplik +
J. W.	30 c. c.	Father	25 years	Cousin 3-4-31	3-7-31	12 days	Very mild measles; reported by telephone
P. W.	30 c. c.	Father	25 years	Cousin 3-4-31	3-7-31	16 days	Very mild measles; reported by telephone
M. O.	25 c. c.	Mother	.....	Playmate	.....	.....	No measles
F. L.	60 c. c.	Father	25 years	Playmate 5-9-31	5-12-31	16 days	Very mild measles; fever mild two days; few macules; Koplik +; recent severe infection with tuberculosis
K. S.	30 c. c.	Mother	20 years	Brother	5-10-30	15 days	Very mild measles; few macules; Koplik

as it immunized completely or greatly attenuated a disease that may assume a grave course.

Zoeppfel reports eighteen children to whom whole blood was given in the incubation period, sixth to seventh day. Five of them did not contract measles, ten showed a modified form of the disease, one had moderately severe measles complicated by otitis media, and two developed the disease later and apparently from another exposure.

Bader⁸ concludes as follows: In a series of thirty patients, from six months to forty-two months of age, from 20 to 30 cubic centimeters of whole blood of persons recovered from measles, two to twenty-five years previously (except in one case in which 10 cubic centimeters was used from

a cousin three months convalescent), was given intramuscularly. This blood, which was given within the first seven days following exposure, completely protected twelve patients, so far as escape of measles is proof of protection, and was followed in nine by a modified and attenuated measles without catarrhal symptoms. In eight patients, mild catarrhal symptoms were present. One child had measles of moderate severity and she was the only one of the thirty known to have had Koplik's spots and a typical eruption. In the others in whom eruptions were present they were not characteristic. There was a distinct modification of the temperature except in two instances. There seems to have been prolongation of the incubation in all except possibly four. There were no complications.

TABLE 2.—*Convalescent Serum Given to Prevent Onset of Measles*

Name	Convalescent Serum	Donor	Exposed	Injected	Result
J. C.	30 c. c.	Child recovered from measles two weeks	Child in next ward bed 5-15-31	5-16-31	Child had acute mastoid at time of exposure; no measles developed.
C. R.	20 c. c.	Nurse recovered from measles three months	Brother 6-15-23	6-17-23	Child had acute mastoid and was running continuous fever; no recognizable measles developed.

It would seem that whole blood from adults long recovered from measles is an effective weapon against measles.

Barenberg⁹ and his coworkers report the following results:

"Of the fifty-six children who had received 30 cubic centimeters of adult blood, forty-three, or 77 per cent, developed measles. Twenty-three, or 53 per cent, of these cases were of the modified or attenuated type. Thirteen children remained free from the disease, although they had been exposed to measles throughout the epidemic, which lasted two months. Since the entire uninoculated group of twenty-three children came down with measles which in no instance could be classed as attenuated, it must be concluded that thirty-six, or 64 per cent, of this group were definitely benefited by the use of adult whole blood. It should be stated that attenuation resulting from this blood was not quite so pronounced as that noted from the use of convalescent serum. The increase in temperature in the attenuated disease was moderate, with an average duration of three days; the catarrhal symptoms were either absent or very mild; Koplik spots were present in about 50 per cent of the cases; the rash in some instances was scanty, in others widespread but never confluent. Of great importance was the fact that these children did not appear ill. They were almost invariably either sitting or standing in their beds and showed no signs of discomfort. No complications developed.

"Attenuation depends on the day of the incubation period on which the injection is given; when it was given in the course of the first five days or from one to eight days prior to incubation, modification resulted in twenty-three out of twenty-six children.

"Nineteen children, or 34 per cent, of those who received adult whole blood, were not protected. Seven of these received the injection of blood too late; in other words, from the seventh to the tenth day of the incubation period, whereas ten were infected with measles from twelve to twenty-three days after receiving the inoculation and thus were deprived of the protective value of the blood.

"The proportion of complications in this group was 14 per cent, as compared to 35 in the control group. It may be noted that the complications occurred in those children who did not come down with the attenuated form of measles. The complications consisted mainly of otitis media, whereas in the control group two children also developed bronchopneumonia. Had we known that the protection with 30 cubic centimeters of adult whole blood does not last longer than eight days, we could have diminished the number of complications by repeating the injections."

They also present the result of three epidemics of measles in their institution—1917, 1924, and 1929. (Refer to chart on page 256.)

The conclusions of Barenberg and his coworkers are:

"1. Convalescent measles serum is the most effective prophylactic measure against measles, but its application is limited because of its lack of availability.

"2. The blood of normal adults who have previously had measles is of great value in bringing about an attenuated form of measles and is the most practical method of prophylaxis.

"3. We failed to confer protection or to mitigate the disease by means of immune goat serum (Tunnichliff)."

COMMENT

While my own experience has been with a limited number of cases only, all in private practice it has been sufficient to confirm the favorable results reported by others and to cause me to recommend the use of whole adult blood, or convalescent blood or serum, as an excellent means of preventing or modifying measles.

Perhaps it should be used only for very young children or those who are ill, as it may be that the immunity produced by protective injection and modified measles may not give as effective protection as an unmodified measles does. The passage of years and the exposure of healed children to other epidemics will settle this.

As shown in Table 1, twenty-four children were injected with whole adult blood between the third and fifth days after exposure. Of these, fourteen developed measles, thirteen very much modified, and one apparently unmodified. The remaining ten did not develop measles and, while presumably exposed, may not have been brought into actual contact with the virus. Two, one in each group, evidently had pulmonary tuberculosis and so were given larger amounts (60 cubic centimeters) of blood; one from the father, developed a very mild measles without evident effect on the progressive healing of his tuberculosis; and the other from a brother who had measles only three years before with complete protection. The latter child was injected within twenty-four hours after exposure.

Two children with acute mastoiditis were given 30 cubic centimeters and 20 cubic centimeters of convalescent serum with complete protection (Table 2).

About two-thirds of the children were given the blood intraperitoneally, some with citrate added and some without. One child who received 30 cubic centimeters of uncitrated blood had some sharp abdominal pain the following day which, however, seemed to be based upon an attack of follicular tonsillitis. All others who were given the blood intraperitoneally suffered no discomfort, while those who received it intramuscularly made considerable complaint and had sufficient discomfort to interfere with play for a day or two. I suggest that the blood be citrated and given intraperitoneally whenever there is no question of aseptic technique. Two were given convalescent serum on the first and second day after exposure in large amounts, with the desire of preventing measles. Neither had measles.

CONCLUSIONS

Convalescent blood or serum as well as adult whole blood or serum offers an efficient means of preventing or modifying measles if given in sufficient amounts between the first and fifth days after exposure.

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DISCUSSION

J. R. JIMERSON, M. D. (1723 East Third Street, Long Beach).—Doctor Sweet presents an exhaustive review of the literature on seroprophylaxis in measles from the standpoint of a practical mind. Such an accomplishment has necessitated the exclusion of a tremendous amount of accumulated material of scientific significance and interest but of little value to the practicing physician. For the individual interested in a more detailed account of this work, I would endorse Dr. I. Kato's "The Bacteriology and Serotherapy of Measles: An Historical and Critical Review of the Literature on Experimental Aspects of Measles" (*American Journal Diseases of Children*, Vol. 36, No. 3).

Griffith and Mitchell state that measles is one of the most readily contracted diseases of its class, the susceptibility to it being so great that the spread of infection is little controllable. This fact, combined with a high morbidity and mortality so often observed during an epidemic, demands that protective measures be applied if available.

Vaccines and commercial animal serums have not proved satisfactory in the practical field, whereas the author points out, "Convalescent serum or blood, as well as adult whole blood or serum, offers an efficient means of preventing or modifying measles if given in sufficient amounts between the first and fifth days after exposure." The production of modified measles by either method is obviously the desired result for the average healthy uninstitutionalized child seen in private practice, and the creation of permanent immunity would be a most desirable result. However, more data concerning dosage for attenuation and whether permanent immunity may thereby be relied on is badly needed.

Degkwitz, in an early report, stated that "if pooled convalescent serum was given in small doses early during the period of incubation a benign form of measles resulted with subsequent active immunization." The scheme offered by Forbes and Green of Denver attains this same result in a high percentage of cases, but is only applicable in families of two or more children and offers no protection for the elder sibling. In the author's series of twenty-four cases, fourteen were given large doses of adult whole blood early during incubation, yet modified measles developed.

Convalescent serum is seldom available during the early stages of an epidemic, but, as pointed out by Doctor Sweet, parental or professional donors are always at hand to supply a practical and fairly efficient means of preventing measles or so attenuating its course that complications rarely occur.

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WILLIAM M. HAPP, M. D. (523 West Sixth Street, Los Angeles).—In blood from persons who have had measles we have a valuable agent for use in the prevention of measles in susceptible children. Unfortunately this method is limited in its scope, and does not offer a means of immunizing the susceptible portion of the community, as is, for example, the patient with diphtheria immunization. Immunity, acquired by the injection of blood from convalescents or from adults who have had measles, is generally not lasting, and the individual may on later exposure acquire the disease in a severe form. As Doctor Sweet has stated, the method is useful chiefly in the protection of ill, weak, or convalescent infants or children at a time when the disease may prove serious or perhaps fatal. It is particularly valuable in children's hospitals and foundling homes in protecting sick and weak children and in stopping the spread of epidemics. This latter is of great importance. If immediately on the outbreak of the first case in an institution all the remaining children in that ward or institution are immunized, the outbreak of a serious epidemic may be prevented and lives saved.

Reviews such as Doctor Sweet has given here are very valuable in presenting a résumé of existing knowledge, and the present review covers the literature in a very comprehensive manner.

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H. E. THELANDER, M. D. (384 Post Street, San Francisco).—It has been too generally assumed that modified measles produces as good immunity as a typical attack. Doctor Sweet is one of the few authors to call attention to the fact that we have no definite evidence to date that this is the case. For the past three or four years we have used both convalescent serum and adult blood prophylactically in private practice and hospital wards. In our practice we have careful records on seventy-four patients thus treated. Of the seventy-four, two patients who developed modified measles after exposure and prophylactic serum, developed two years later, after another exposure, a well-recognized measles. One of these had received parents' blood and the other convalescent serum after the first exposure. The protection afforded by adult whole blood in doses varying from 10 to 30 cubic centimeters, depending on the age of the child and the length of time after exposure that it was given, was practically the same as that of convalescent serum in 3 to 5 cubic centimeters; the former gave complete protection to 43 per cent, and the latter to 42 per cent. Three children receiving parents' blood had moderately severe measles after incubation periods of seven-teen to nineteen days. Our knowledge of immunity, particularly in the virus diseases, is based largely on conjecture and analogy, both of which may lead to serious fallacies in interpretation of findings.

✽

ANDREW J. THORNTON, M. D. (3235 Fourth Street, San Diego).—There seems to be little doubt that a fair number of people have measles more than once. Besides my own observations on the subject, I have in mind a physician, whose judgment I respect, who observed three distinct attacks of typical measles in his own son. Whether it is due to individual over-susceptibility or to the fact that some epidemics are more severe than others is difficult to state. The value of convalescent serum or whole blood as a means of protecting individuals from measles has been amply proved.

My personal experience is limited to a small series of cases, but the splendid résumé of the literature on the subject by Doctor Sweet, together with his own series of cases, leaves no doubt in our minds that measles can be prevented or that it can be modified, depending on the potency of the serum or blood used and the time of injection after exposure.

The question in our mind is, just what use should be made of this preventive measure. What type of child or group of children should receive it as a routine measure. While this question will be settled by the individual physicians differently, it seems to me certain principles should guide us in its use. Measles epidemics come more or less regularly every two years. During such a wave of the disease a certain class of children, either because of their age or general state of health, make up the mortality list or a very large percentage of it.

Bearing these facts in mind we, as practitioners of preventive medicine, should "broadcast" to our patients under such circumstances the fact that measles prevention and measles modification are available and should be used.

THE LURE OF MEDICAL HISTORY*

HIERONYMUS FABRICIUS AB AQUAPENDENTE†

By S. L. MILLARD ROSENBERG, Ph. D.
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II

LET us now examine the volume referred to in the March issue of CALIFORNIA AND WESTERN MEDICINE. It is a collection of five works by Fabricius, but there is no general title page to that effect; only on the back of the volume is this indicated, where we read: *De Formato Fœtu et alia opuscula*. It is a folio, about 11½ by 16½ inches, beautifully printed in large type, with very wide margins, on excellent paper; the initials and end-pieces are well-executed woodcuts, and the great value of the volume is in the exquisitely engraved copper plates with which the several works are profusely illustrated; all of these are full-page plates except a number which are double page. On the second fly leaf is pasted the title page of the first edition, printed at Venice by Bolzetta in 1600; there is no title page by the printer of the ensuing work. Perhaps there had been one which was removed in order to substitute the very beautifully designed and executed Venice title page. It reads: *Hieronimi Fabricii ab Aquapendente De Formato Fœtu. Venetiis. Per Franciscum Bolzettam. 1600*. The colophon, however, indicates the Paduan printer and date: *Patavii. Ex Typographia Laurentii Pasquati, Impress. Almæ Universitatis Juristarum. Anno Domini MDCIV*. Lorenzo Pasquati is also the printer of the next work in the volume: *De Venarum Osteolis*. This work is dated 1603; on the title page the author's name is qualified with "Anatomici Patavini"; that is, Professor of Anatomy at the University of Padua. There is no colophon. The third work in the volume, on the embryology of birds, is entitled: *Hieronimi Fabrici ab Aquapendente olim anatomici Patavini celeberrimi De Formatione Ovi et Pulli tractatus accuratissimus*

*A Twenty-five Years Ago column, made up of excerpts from the official journal of the California Medical Association of twenty-five years ago, is printed in each issue of California and Western Medicine. The column is one of the regular features of the Miscellany Department of California and Western Medicine, and its page number will be found on the front cover index.

†Part I of this article was printed in the March issue of CALIFORNIA AND WESTERN MEDICINE, page 173.

ad Illustris. & Reverendis. D. D. Carolum Medicum S. R. E. Cardinalem Amplissimum. Patavii ex officina Aloysii Bencii Bibliopolæ. 1621. The "olim" and "celeberrimi" and the date remind us that Fabricius had died in 1619 and that this work is posthumous. The dedication to the Cardinal is written by Joannes Prevotius of the Paduan faculty of medicine. No colophon. The fourth work, a delightful essay on the speech of the lower animals, resumes the chronological order, and is entitled: *Hieronimi Fabrici ab Aquapendente Anatomici Patavini De Brutorum Loquela. Patavii, Ex Typographia Laurentii Pasquati. MDCIII*. There is a dedication by Joannes Ursinus, Ph. D., M. D., Padua, to the "Illustrissima Heroina Hedvigi Mielecka de Kormanice." The author is spoken of by Doctor Ursinus as (retaining the ablative of the sentence) "Doctissimo Viro, Academiæ quidem Patavinæ Supraordinario Medico & Chirurgo, Anatomes vero singulari & incomparabili Professore, Hieronymo Fabricio ab Aquapendente." Why Doctor Ursinus instead of the author offered the work to the heroic Polish lady does not appear, but there is mention of the mutual admiration of the two. Let us hope romance is hidden in it. The fifth and last work included in this volume is an inquiry into the physiology of human speech. It is from the same press and of the same date as the fourth. The title page shows that the work was edited by Doctor Ursinus in 1601, from which we may infer that the same editorship was true of the preceding work. The title reads: *Hieronimi Fabrici ab Aquapendente Philosophi ac Medici in Florentissimo Gymnasio Patavino Anatomes et Chirurgiæ Professoris Publici Singularis et Supraordinarii De Locutione et eius Instrumentis*. Here again is a dedication by the editor, to a young Polish noble, Thomas Zamoyski. Between the dedication and the body of the work, contrary to custom, the index occurs. Following the text is a beautiful engraving of a dissection of the organs of speech; the opposite page, containing the explanation of the dissection, is pasted to the fly leaf corresponding to the one on which the title of the first work in the volume is pasted.

Returning to this first work, *De Formato Fœtu*, it is seen to be rightly placed first; it occupies nearly half of the volume (152 of the 328 pages) and originally appeared prior to the other contents, though the edition here is subsequent to the second, fourth, and fifth work in the volume. As to its value in medical history, I shall quote from an article by Dr. Joseph Grindon of St. Louis, a charming review of the life and writings of Fabricius, in the *Interstate Medical Journal* for August, 1906; Doctor Grindon's article does not mention the book we are concerned with, but one printed at Leipsic in 1687, a volume of the *Opera Omnia* of our author, which happens to contain some of the items in the one before us, beginning as it does with *De Formatione Ovi et Pulli*, followed by *De Formato Fœtu*, of which Doctor Grindon says:

"The author draws largely on the opinions and work of his predecessors, fortified and illustrated



Fig. 5.—Figure xlv, Plate xxii, of *De Formato Fœtu*. It shows the position of the fetus of a mare, but the amnion membrane beneath is removed. A, A, A, the amnion. B, B, B, vessels spread through it. C, C, C, C, the three trunks of the umbilical vessels wrapped around each other.

by his numerous researches bearing upon the comparative anatomy of gestation. This folio contains thirty-three full-page plates figuring pregnancy in man, the sheep, cow, horse, swine, dog, rat, mouse, guinea-pig (thus early a contributor to science), the shark and the serpent. In fact, it is on this work, together with his observations on the valves of the veins, that Fabricius' chief claim to the admiration of posterity must rest. It is not extraordinary that he should defend certain errors. Thus he maintains that the vessels of the placenta communicate with those of the uterus, although Arantius had proved the contrary some years before. According to him, man has no allantois. It was generally believed at that time that the amnionic fluid was urine, some holding that it escaped by the urethra, although the prevailing opinion was that it passed along the urachus and umbilical cord, spread out between the chorion and amnion, and filtered out through the latter. Fabricius declares that it passes out in this manner to the chorion. However, he holds that the urachus does not consist of a single tube, but of a bundle of minute hollow fibres."

Charles Singer, lecturer on the history of medicine at the University of London, in his *Evolution of Anatomy*—a valuable and entertaining book—says of *De Formato Fœtu*:

"This is a magnificent comparative study of the embryo in the more advanced state, and is the first work of its kind. It describes developmental stages in a long series of animals: man, rabbit, guinea pig, mouse, dog, cat, sheep, pig, horse, ox, goat, and deer among mammals; the smooth dog-fish among fishes; and the viper among other creatures. In the figures a good deal of attention is given to the heart and the ductus arteriosus and the foramen ovale are frequently shown. In the text special attention is drawn to the structural changes in the vascular system incident on birth. The work contains the best figures up to its time of the human gravid uterus and membranes and of the human placenta. It includes a series of fine demonstrations of the course and relations of the umbilical vessels, and dissections of various parts

of the human fetus. Even more detailed is the investigation of the uterus, placenta, membranes, vessels, and fetus of the sheep. The book also contains the earliest figure of the heart of a fish."

It is illuminating to reread the brilliant review of embryology by Dr. A. W. Meyer of Stanford University, published in *CALIFORNIA AND WESTERN MEDICINE* in the eight issues from December 1931 to July 1932, in which are several references to Fabricius and specifically to *De Formato Fœtu*. Doctor Meyer makes Fabricius' place in the history of medicine quite clear, especially what Harvey owed him in his study not only of the circulation of the blood but even more of embryology. It is fascinating to read Doctor Meyer's explanation of the theories that in turn were accepted, and in doing so we learn much about Fabricius. A brief extract must serve here:

"Fabricius, whom Singer regards as 'the effective founder of modern embryology,' had expressed the opinion that most animals come from ova . . . and held that the chalazæ do not represent the sperm of the cock but take part in the formation of the embryo. . . . 'The foetus of animals,' he declared, 'is engendered in one case from an ovum, in another from the seminal fluid, in a third from putrefaction or by the spontane-

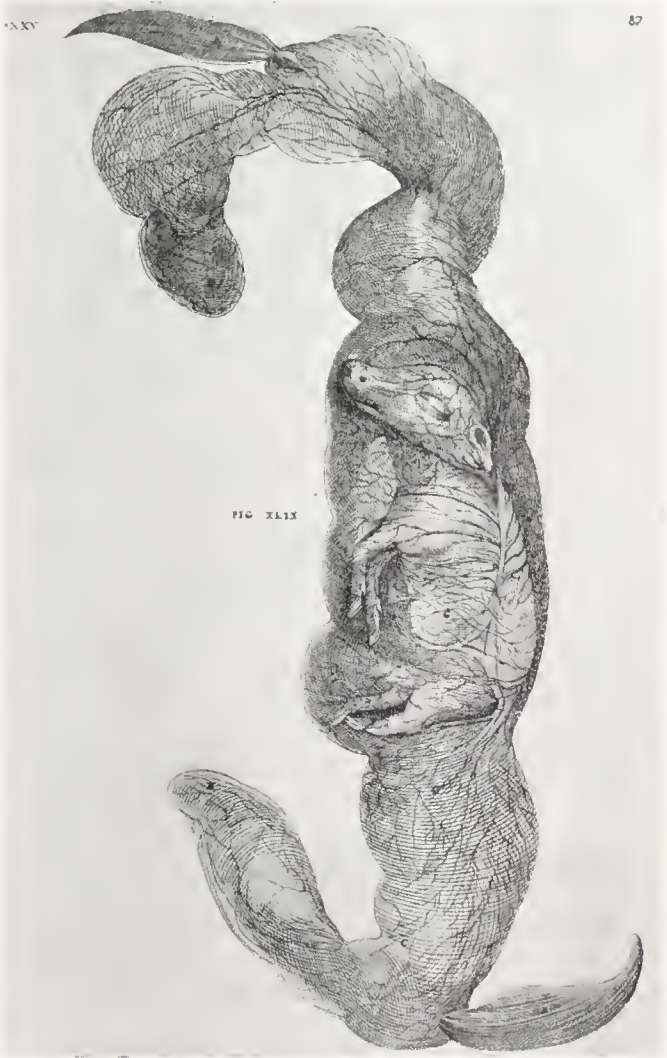


Fig. 6.—Figure xli, Plate xxv, of *De Formato Fœtu*. Figure xlix shows a fetus taken from the uterus of a sow, surrounded by three membranes. A, A, the appendages of the allantois. B, B, the extremities of the chorion, which are three times longer than the fetus itself, and without the caruncles. C, C, C, C, the vessels of the chorion.

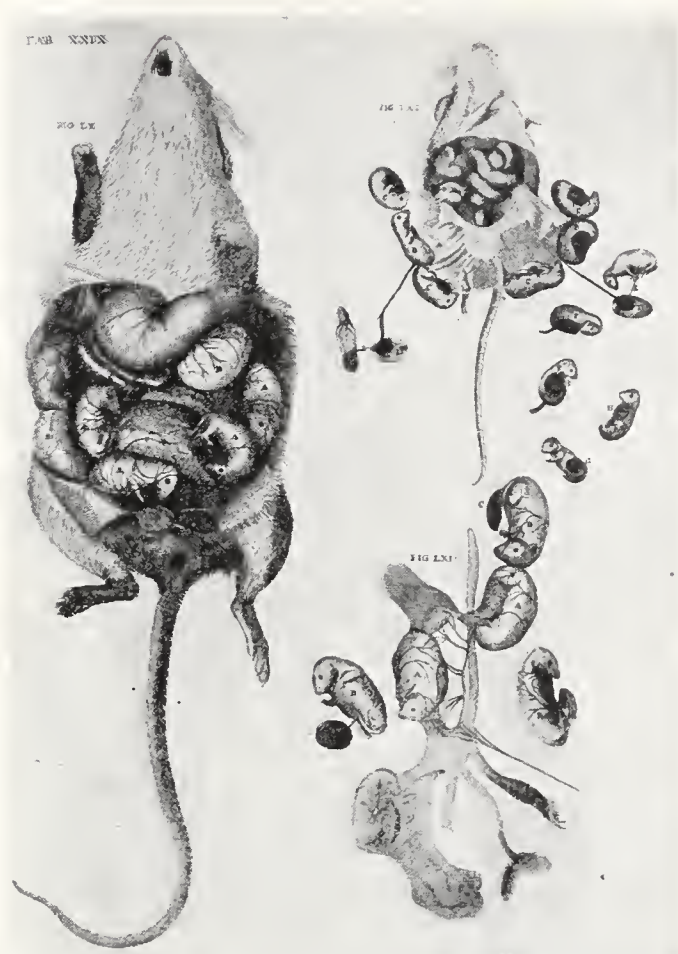


Fig. 7.—Figures ix, lxi, and lxii, Plate xxix of *De Formato Fœtu*. Figure ix shows a larger house-mouse with seven fetuses in various positions. A, A, A, the four more conspicuous fetuses. B, B, B, the three less conspicuous fetuses. C, C, the intestinal colon. Figure lxi shows the uterus separated from the body, and six fetuses. A, A, A, three fetuses involved in their membranes. B, B, B, three others deprived of their membranes, showing the placenta in different ways. C, C, C, the placenta of each fetus. Figure lxii shows a mother of the smaller house-mouse, with six fetuses and their position; also, the divers positions of the placentae. A, A, both corneae of the uterus. B, B, some of the fetuses with their heads upwards. C, C, C, C, four fetuses with their heads declining downwards to the mouth of the uterus. D, D, placentae. F, F, F, F, four fetuses separated from the uterus. G, the placenta appended to the loins. H, the placenta appended to the thorax.

ous act of nature, automatically.' Nevertheless Fabricius described the fetal membranes and apparently saw and described the ovarian vesicles."

Doctor Meyer quotes Willis, who "declared that Harvey wrote his treatise on generation 'in the harness of Aristoteles' and 'with the bit of Fabricius in his teeth.'"

With these few hints of the historical importance of *De Formato Fœtu*, we must pass to the second work in our volume: *De Venarum Ostiolis*,* of which Professor Singer says:

"Perhaps the best known work of Fabricius is that *On the Valves of the Veins*. It had much influence on Harvey, who borrowed figures from it and based much of his argument concerning the circulation of the blood on the action of these valves. Fabricius' excellent figures of the valves in the veins are the first in literature. He explored them better than anyone before his time, and they have often been regarded as his discovery. Nevertheless he had not the least inkling of the function

of the valves, and regarded them as slowing the flow of blood towards the periphery and thus preventing blood from collecting at the extremities."

In the article already quoted Doctor Grindon observes:

"Although Fernel, Sylvius (about 1555), Amatus Lusitanus, and Cannanus (in 1547) had written of valves in the veins [also Vesalius, we may add]; their descriptions were vague and left much to be desired. Sylvius, indeed, does not seem to have considered them normal and constant structures. Eustachius and Fallopius had denied their existence.

"Fabricius presents the subject in clear and unmistakable fashion. Seven full-page plates depict these ostiola or little doors in various veins. He arrogates to himself the full credit for the discovery, expressing his surprise that no ancient nor modern anatomist should ever have seen the valves until 1574, when he first beheld them *summa cum lætitia*. Yet he could hardly have ignored the work of those who preceded him, since his preceptor, Fallopius, had written on the subject, criticising them."

No one, however, appears to have offered a rational conjecture on the use of the valves or to have traced them through the venous system at large until Fabricius demonstrated their presence in all the veins of the extremities. But he thought they had a subsidiary office in connection with the collateral circulation, supposing that they diverted the blood into branches near the valves. Thus he missed seeing the importance of the anatomical and experimental facts gathered by himself, although he correctly described, and showed in beautifully executed engravings, the direction in which the valves open. To continue in Doctor Grindon's words:

"Fabricius never took the next and, as it seems to us, obvious step: the discovery of the fact that the blood in the veins flows toward the heart. This was left for the more logical mind of his great pupil of undying memory. On the contrary, he explains the use of the valves [aside from the diversion function above mentioned] by saying that they check the excessive torrent of flow toward the extremities and thus prevent their congestion. The latter statement contains a germ of truth, but not as he understood it."

At the time when Harvey was studying at Padua under Fabricius the general notions as to the circulation may be briefly summed up as follows: The blood ebbed and flowed to and from the heart in the arteries and veins. From the right side at least a portion of it passed to the left side through the vessels in the lungs, where it was mixed with air. Lastly, there were two kinds of blood. There was the venous blood, formed originally in the liver, thence passing to the heart, from which it went out to the periphery by the veins, and returned ("ebbed") by them to the heart. Second, there was the arterial blood, containing "spirits" produced by the mixing of the blood with the air in the lungs. The blood was then sent out from the heart to the body, and returned to the heart by the same vessels. The

* Doctor Singer wrote the author of the present study some time ago that a critical edition of "*De Venarum Ostiolis*" was being prepared by Dr. Kenneth Franklin of Oriel College, Oxford.

pulmonary circulation was understood so far as above described, but its relation to the systemic circulation was unknown. The action of the heart as a propulsive organ was not recognized. It was not until 1628 that Harvey announced his views to the world by publishing his treatise *De Motu Cordis et Sanguinis*. His conclusions are given in the following celebrated passage:

"And now I may be allowed to give in brief my view of the circulation of the blood, and to propose it for general adoption. Since all things, both argument and ocular demonstration, show that the blood passes through the lungs and heart by the auricles and ventricles, and is sent for distribution to all parts of the body, where it makes its way into the veins and pores of the flesh, and then flows by the veins from the circumference on every side to the centre, from lesser to the greater veins, and is by them finally discharged into the vena cava and right auricle of the heart, and this in such a quantity, or in such a flux and reflux, thither by the arteries, hither by the veins, as cannot possibly be supplied by the ingestor, and is much greater than can be required for mere purposes of nutrition, it is absolutely necessary to conclude that the blood in the animal body is impelled in a *circle*, and is in a state of ceaseless motion; that this is the act or function which the heart performs by means of its pulse; and that it is the sole and only end of the motion and contraction of the heart." (Book X, ch. xiv, p. 68.)

The only figures included by Harvey in his great book were taken from his master's *De Venarum Ostiolis*.

(To be continued)

CLINICAL NOTES AND CASE REPORTS

A NEW METHOD OF PROSTATECTOMY

By E. J. CASPER, M. D.

AND

L. C. JACOBS, M. D.

San Francisco

THE following preliminary notes on a new procedure for prostatectomy are submitted:

Procedure.—A No. 18 Fr. sound is inserted into the bladder and a suprapubic incision is made over the "Cave of Retzius," which is extravescicular. The bladder is mobilized anteriorly and displaced upward, which exposes the capsule of the prostate gland. The capsule of the prostate is incised for one-half an inch longitudinally, beginning one-quarter of an inch below the bladder. Two hemostats are inserted transversely on each side of the capsule, which is incised between the hemostats. The inferior portion of the capsule is sutured to prevent bleeding, and the hemostats removed. The superior portion of the capsule is displaced upward, carrying the bladder with it, thereby exposing the prostate. The upper two-thirds of the prostate is freed from its capsule by blunt dissection with the finger. The prostatic lobes are removed separately by excision.

Care must be used to avoid accidental opening into the prostatic urethra, which may be a third of an inch in diameter and fusiform in shape in this region.

The bladder is returned to its normal position and sutured to the posterior surface of the pubes. The abdominal wall is closed in layers. A retention catheter is allowed to remain for several days for urinary drainage and lavage. The advantages of the operation are:

1. There is no solution of the continuity of the urethra.
2. Drainage of the surgical wound is unnecessary.
3. Damage to the seminal vesicles is avoided.
4. The ejaculatory ducts are preserved.
5. Absence of shock and hemorrhage.
6. Ease of adequate exposure of prostate.
7. Hospitalization is shortened.

PHYSOMETRA

REPORT OF CASE

By CLEMENT H. ARNOLD, M. D.

San Francisco

PHYSOMETRA, or gas in the cavity of the uterus, is a rather unusual and startling occurrence. It has been described by Kelly¹ as follows:

"Enlargement of the uterus sometimes follows a cervical operation or occurs in the course of cervical disease, and should always be borne in mind. While this may be due to the extension of growth, it is also frequently the result of a stenosis, with the retention of blood, pus, or gas (physometra), or a combination of these. We are seeing more of these heretofore rare affections since the advent of radium in cervical carcinoma. If a patient has lower median pain she has not felt before some rise in temperature, it is often well to pass an instrument, say a curved artery forceps into the uterus and open it, watching to see whether there is any discharge. A physometra is often explosive in its escape. If there is retention it must be given free exit and watched from time to time."

Hector² states:

"... Most of the reported cases of physometra (gas in the uterine cavity) have been associated with septic abortions or other complications of the puerperium. In such cases the symptoms are grave and the issue usually fatal. The organisms concerned are frequently *B. welchii*, anaërobic streptococci, and *B. coli*." Operation in the case quoted by him, "showed a uterus containing multiple fibroids of varying sizes, some cystic, some calcareous. The uterine cavity was distended and fluctuating. On opening the uterine cavity a considerable quantity of gas escaped with a 'hiss,' followed by one and a half pints of pus with the odor of *B. coli*," ... there was also present an adenocarcinoma of the corpus.

When the cervical canal is occluded,³ the uterine cavity is gradually filled with pent-up secretions. If putrefaction with gas has occurred, it is called physometra.

Sleeman⁴ gives an uncommon case of physometra, referring to eight others of his own notice, with the clinical picture of *B. welchii* septicemia, extreme anemias (680,000 red cells per cubic millimeter) and in which particular case instrumental interference was suspected but unproven, with a rapidly fatal outcome.

Ottow⁵ records a case due to the secondary infection of a large piece of retained placenta; and Doederlein⁶ a case of acute antelexion due to an old ventrofixation occluding the cervical canal and preventing normal delivery, with secondary infection in the lacerated tissues, causing physometra; while Frank⁷ states that physometra may develop if gas-producing organisms penetrate secondarily in any gynecologic or obstetric condition.

REPORT OF CASE

Mrs. ———, a widow, age thirty-six, who had always been in good health, was referred to us for pain in both inguinal regions, over the sacrum, in the bladder, which was accompanied by a rather profuse foul-smelling discharge. There had been no bleeding other than the normal menstrual amount.

The patient stated that shortly after her last period, ten days previously, she began, for the first time, to have pain low down in her sides and the discharge which had gradually increased and assumed the odor complained of. She had been in bed for the last two days with a slight temperature, she believed, as she had not summoned a physician. She has been widowed two years, and has one child six years of age whose birth history is normal. She states that her sexual and menstrual life have always been normal.

She admitted occasional sexual contact; states that she had missed no periods. She was very critically questioned as to interrupted pregnancy, but denied it definitely.

Examination at home, revealed a well-built young female apparently not very ill, lying comfortably in bed. Temperature was 99.6; pulse, 115; and with no remarkable physical findings except the following: Some slight tenderness over the pubis and in both inguinal regions, but no rigidity; the uterus just palpable at the pubis, but abdominally not tender. Her outlet showed a moderate relaxation, but no cystocele or rectocele; the urethral orifice was negative.

Vaginal examination showed some tenderness in both adnexa, but no masses. There was a slight erosion on the posterior lip of the cervix, a moderate discharge which had the combined odor of *B. coli* and putrefaction; the uterus appeared about twice its normal size to palpation.

The diagnosis of erosion, endocervicitis, and probable low-grade subacute pelvic inflammatory was made. She was placed upon expectant treatment and P. M. C. douches and told to report to the office when able.

Three days later, in the office, because of the discharge and its odor, a sterile swab was inserted into the cervical canal for the purpose of making smears. There was a slight resistance just within the external os which when overcome suddenly released a small amount of gas, foul-smelling and accompanied by a decidedly audible "hiss." After appropriate preparation a sterile probe was inserted further into the uterine canal, with a repetition of the same phenomenon. The diagnosis of physometra, as an accompaniment of multiple strictures due to a partially obliterating endocervicitis, was added.

Laboratory Report.—The following laboratory report is presented through the courtesy of the Mount Zion Hospital clinical laboratory.

Twenty-four-hour culture of material from cervix and uterine canal: *B. coli*, four plus; *Streptococcus haemolyticus*, two plus; *Streptococcus viridans*, two plus (green pigment forming colonies); Gram-negative diplococci, two plus (*M. catarrhalis*?).

A moderate cervical dilatation was performed in the office, and further treatment was conservative. The cervical canal was cleaned out three times weekly with hydrogen peroxid and followed with a tampon impregnated with 0.2 per cent formalin in pure glycerin, and she was instructed to use the standard P. M. C. hot douche at least three times daily. She was

also given capsules of quinin, grains five, and ergotin, grains one, three times a day after meals to restore uterine tone.

Her discomfort and fever disappeared almost immediately, and she has remained free from such as well as the odor for the past two weeks. Her uterus is normal size; and although there have been no symptoms or signs of malignancy she has been advised to have a diagnostic curettage, with cauterization of the cervix.

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PERFORATED GASTRIC ULCER IN A PATIENT WITH TABES DORSALIS

By JOHN MARTIN ASKEY, M. D.

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ACUTE upper abdominal pain in a patient with known tabes dorsalis, especially if accompanied by vomiting, usually is interpreted as due to a gastric crisis. Coincident occurrence of an acute abdominal surgical condition with tabes is rare, but failure to recognize such coincidence in these patients is disastrous.

We report the following case primarily because of its relative rarity, secondarily to emphasize the necessity of a rigid diagnostic scrutiny of every tabetic patient with severe abdominal pain.

REPORT OF CASE

Mr. D. B. S., age forty-two, had been diagnosed as having tabes dorsalis for ten years, with the usual findings of a sluggish pupillary light reflex, absent patellar reflexes, incoördinate gait, and a strongly positive blood Wassermann reaction. He had suffered intermittently for years with some postprandial epigastric distress, which he had interpreted as due to his blood disease. About six months previous to his present sickness he was seized with severe epigastric pain and vomiting. He was seen by two physicians, and a diagnosis made of a gastric crisis. He was relieved by a hypodermic of morphin, and in a few days was apparently as well as ever.

On October 29, 1926, he had some dull epigastric distress and took nothing but liquids. About eleven at night he suffered an acute attack of mid-epigastric pain. He did not vomit immediately, but, believing vomiting would relieve him, took some fluid extract of ipecac and vomited some "brownish liquid" in the toilet. This was not saved. He was seen at twelve midnight. At this time there was slight rigidity of the upper right rectus muscle. The temperature and pulse rate were normal. He did not appear to be in acute pain.

In view of his known tabetic condition, and the knowledge that he was supposed to have had former attacks of gastric crisis, the latter diagnosis was made tentatively.

A hypodermic of one-quarter of a grain of morphin did not relieve him, and in thirty minutes another one-quarter of a grain was given. This relieved him slightly.

At six the next morning, he was suffering more acutely, there was marked generalized abdominal

rigidity, particularly right-sided, and tenderness in the lower right quadrant. The temperature had risen to 99.4 degrees.

A diagnosis of a perforated viscus, probably a gastric ulcer, was made. He was sent to Saint Vincent's Hospital, where Dr. T. C. Myers saw him, concurred in the diagnosis, and immediately operated. A pre-operative leukocyte count was 18,126, with 80 per cent polymorphonuclear cells.

An acutely perforated gastric ulcer on the lesser curvature near the pylorus was found. The opening was about three-quarters of an inch in diameter, with thin sclerotic edges. There was a large amount of gastric contents in the peritoneal cavity.

The opening was closed without posterior gastro-enterostomy due to the relatively poor condition of the patient. It had been over six hours since the perforation had occurred. Postoperatively his condition was precarious for several days, but then he steadily improved, and was discharged five weeks later in good condition. Following the operation he still had sporadic trouble, with some postprandial distress and pyrosis, but was comfortable when he was faithful to a bland ulcer diet.

Four and a half years later he suddenly developed severe pain in the epigastrium and umbilical region. At this time he was in a small town seventy-five miles away, and was seen by another doctor. Two days later he was vomiting continuously, and Dr. T. C. Meyers was consulted over the telephone. The possibility of a perforated viscus was stressed and the patient advised to come in to the hospital. This he refused to do until the fourth day, April 5, 1931, after the development of the severe pain, when he was admitted to Saint Vincent's Hospital.

At the time of admission the temperature was 102.4 degrees; the pulse was only 88. There was no abdominal distention or rigidity, but peristalsis was definitely diminished and the leukocyte count was 21,000. A tentative diagnosis was made of perforated gastric ulcer, with generalized peritonitis.

On April 10, 1931, he developed signs of hypostatic congestion in both lungs. His condition became rapidly worse and he died on April 13, 1931.

Necropsy.—At necropsy the site of the ulcer found at operation in 1926 was healed, but in the first part of the pylorus, on the posterior wall, was an ulcer about 1.5 centimeter in diameter and 5 centimeters deep, firmly adherent to the pancreas and mesocolon. There was acute generalized peritonitis, with about 100 cubic centimeters of thick pus in the pelvis. The ulcer evidently had ruptured, then became sealed over by the mesocolon. The histologic examination of the ulcer showed an increase of interstitial fibrous tissue in the muscularis layer, the latter infiltrated with round cells and mononuclear cells.

COMMENT

Stokes¹ in "Modern Clinical Syphilology" describes three types of gastric crises, namely, "the attack of pain without vomiting; the attacks of vomiting without pain; and the most common type, combining both pain and vomiting. Many gradations from abortive to severe forms exist."

It rarely occurs that a perforated peptic ulcer, or another acute abdominal condition exists in the tabetic patient with symptoms of one of the above types, and the diagnosis is apt to be gastric crisis. It is none the less as feasible as the reverse, where the gastric crisis mimics other abdominal disease.

Gastric syphilis with a syphilitic gastric ulcer may occur, but is rare. The coexistence of a non-specific gastric ulcer with tabes is not so rare. Perforation in either type is a potential menace, and an accurate diagnosis and immediate surgery in such event is essential.

Hunt and Lisa² recently reported four cases of tabes dorsalis with associated duodenal ulcers, in only one of which was the ulcer suspected before death. Two died from hemorrhage, one from an acute perforation, and one from peritonitis following a posterior gastro-enterostomy.

In the case here reported, the correct diagnosis was nearly missed, and then made only after the time limit usually considered safe for surgical repair of a ruptured peptic ulcer.

It is interesting to note that the rupture of the second ulcer was due to a new lesion, as the necropsy revealed healing at the site of the first ulcer. The histologic findings were those of a simple ulcer, and suggest the same etiology as that of any peptic ulcer.

CONCLUSION

The investigation of the gastro-intestinal tract of the patient with tabes dorsalis who has gastro-intestinal symptoms, to eliminate possible organic lesions would seem strongly indicated in the light of the above case. A foreknowledge of a gastric ulcer or gall stones would encourage a most meticulous scrutiny in the event of later acute abdominal pain.

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COMPLETE INVERSION OF THE PUERPERAL UTERUS*

By RAYMOND C. HALL, M. D.
San Diego

REPORT OF CASE

THE patient is a primipara, twenty-six years old. In 1917 she had an operation for swollen glands in left side of neck; in 1921 a "nervous breakdown"; and in 1927 an appendectomy.

Her last regular menstruation was on March 28, 1930. Pregnancy was normal except for nausea and vomiting throughout. Patient was admitted to San Diego County Hospital on November 24, 1930, for vomiting of pregnancy, and was discharged on December 4, 1930, improved. She attended the prenatal clinic at the County Hospital four or five times. Blood pressure, urinary findings and weight normal. Blood Wassermann negative.

Labor began at 6 p. m. December 25, 1930. Patient was admitted to the Obstetrical Service of the San Diego County Hospital at 7:45 p. m. Membranes ruptured spontaneously at 8:30 p. m. At 9:30 p. m. the intern delivered the patient of a live female baby, weighing five pounds five ounces. He admitted using considerable pressure on the fundus and traction on the cord in order to express the placenta. At 9:40 p. m. the placenta attached to the fundus suddenly came down through the lower opening of the birth canal, carrying with it the entire inverted uterus. At no time had pituitrin been administered to the patient.

The intern at once summoned the resident. The latter telephoned me to come to the hospital. On my arrival in the delivery room at 10:15 p. m., the completely inverted uterus with placenta attached to the

* Read at a meeting of the Los Angeles Obstetrical and Gynecological Society, December 8, 1931.

fundus lay between the patient's thighs. A large hematoma had formed between the placenta and fundus, causing the membranes to bulge out on the right side. The patient was in severe shock, no radial pulse could be felt, extreme pallor and restlessness were noticeable.

Placenta and membranes were removed from the uterus. Under anesthesia the inverted uterus was gently pushed up as far as possible. Then an attempt was made to reinvert the uterus by manipulating it in exactly the opposite direction from which the inversion occurred. In brief, by this method the last part of the uterus to become inverted is the first part to be reversed through the cervix. However, the cervix was too tightly contracted around the neck of the inverted uterus; consequently this attempt at reposition was unsuccessful. The patient was in profound shock and had lost 1,400 cubic centimeters of blood; therefore it was deemed wise at this point to treat the shock and hemorrhage before any further measures toward reposition of the uterus were undertaken. While a suitable donor was being selected for blood transfusion and the operating room being prepared, patient was given 1,000 cubic centimeters of normal salt solution intravenously. General condition improved so that radial pulse was perceptible.

At 11:15 p. m., under ethylene anesthesia, the abdomen was opened through a lower mid-line incision. The uterus was not in the pelvis. A crater was seen in the region of the cervix into which had been drawn the tubes, round ligaments, and the ovaries. Reposition of the inverted uterus was effected by the method described by Huntington.^{1, 2} One cubic centimeter of pituitrin was given subcutaneously. The abdomen was then closed in layers.

Immediately the patient was given 500 cubic centimeters of normal salt solution intravenously. On the arrival of the donor for the blood transfusion she was transfused with 500 cubic centimeters of whole blood by the direct method. The patient was returned to the ward in fairly good condition.

On the first postpartum day her blood showed: red blood cells, 3,780,000 per cubic millimeter; hemoglobin (Sahli), 70 per cent; white blood cells, 29,900 per cubic millimeter.

Differential: polymorphonuclear neutrophils, 89 per cent; small mononuclears, 9 per cent; large mononuclears, 2 per cent.

In the afternoon of the fourth postpartum day the patient had a chill. Her temperature was 102 degrees Fahrenheit; pulse, 136; and respiration, 24. On his own initiative the intern gave, intravenously, five cubic centimeters of a 1:1000 solution of metaphen. A culture was taken from the cervix and subsequently was reported to show *Streptococcus hemolyticus*. A culture of both the blood and the urine was negative.

On the fifth postpartum day the temperature dropped to normal and remained normal throughout convalescence. This day the blood showed: red blood cells, 1,700,000 per cubic millimeter; hemoglobin (Sahli), 40 per cent; white blood cells, 11,200 per cubic millimeter.

Differential: polymorphonuclear neutrophils, 76 per cent; polymorphonuclear eosinophils, 1 per cent; small mononuclears, 17 per cent; large mononuclears, 6 per cent.

On the sixth postpartum day the patient was transfused with 500 cubic centimeters of whole blood by the direct method. On the eighth postpartum day the blood examination showed: red blood cells, 3,060,000 per cubic millimeter; hemoglobin (Sahli), 60 per cent; white blood cells, 15,300 per cubic millimeter.

Differential: polymorphonuclear neutrophils, 72 per cent; small mononuclears, 24 per cent; large mononuclears, 4 per cent.

The patient was discharged from the hospital on the seventeenth postpartum day in good general condition. The fundus was firm, small, and in good condition; the cervix was soft and patulous.

The patient did not nurse her baby. She menstruated normally for the first time when her baby was

four months old and continued to do so every twenty-eight days until her baby was six months old, when the follow-up was ended.

COMMENT

The earliest description of a complete turning inside out of a uterus is given by Ambroise Paré.³ In the twenty-fourth book of his work, "Generation of Man," he writes:

"Of the falling downe or perversion, or turning of the wombe: The wombe is said to fall downe and be perverted, when it is moved out of its proper and naturall place; as when the bands and ligatures thereof being loosed and relaxed, it falleth downe into one side or other, or into its own necke, or else passeth further, so that it comes out at the necke, and a great portion thereof appears without the privie parts."

From this definition Paré goes on to describe causes, treatment, and cure.

In 1824 Charles Mansfield Clarke⁴ makes use of the term "inversio uteri," and describes the condition we know as inverted uterus. In 1874 Charles Clay, in his "Complete Handbook of Obstetric Surgery,"⁵ states the following:

"A turning of the uterus more or less inside outward by the inner surface of the fundus passing through the os, reversing its former position—mucous coat outwards, peritoneal coat inwards."

Though medical custom sanctions the use of the term "inversion of the uterus," it must be admitted that a check of numerous obstetrical and gynecological textbooks, both early and recent, reveals no mention of the person who originated the expression "inversion of the uterus." When we consider that the verb invert commonly signifies to turn upside down, then inversion does not appear to be any more medically exact in this connection than the original term "perversion of the uterus" used by Paré, the first man to describe the condition. However, the verb introvert—to draw into or inward—or the verb invaginate, suggest themselves as somewhat more accurate. Would not the term "introversion of the uterus" be more descriptive of this strange accident?

The chief reasons for reporting this case are:

1. To record a case of complete inversion of the puerperal uterus.
2. To stress the fact that no vigorous attempt at replacement should be undertaken prior to restoration of the patient from the effects of shock and hemorrhage.
3. To recommend the treatment of complete inversion of the puerperal uterus by the operative procedure devised by Huntington, since this method does not increase shock, accomplishes the end desired with the greatest facility, and leaves the patient with a functioning uterus.

710 Medico-Dental Building.

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PERFORATED GASTRIC ULCER

"FORME FRUSTE" TYPE—WITH SUPRADIAPHRAG-
MATIC DRAINAGE OF THE LOCALIZED
ABSCESS

By E. H. EISKAMP, M. D.

AND

F. E. BLAISDELL, JR., M. D.
Watsonville

THE case report below is made because of the following points of interest:

1. An apparent "forme fruste" type (H. A. Singer, M. D., R. T. Vaughan, M. D.) of perforated gastric ulcer in which surgery was refused.
2. Apparent spontaneous recovery, followed by: (a) A localized subdiaphragmatic abscess and pleural effusion; (b) surgical supradiaphragmatic drainage of the abscess.
3. Postoperative lung fistula.
4. Complete recovery.

REPORT OF CASE

Mr. M. S., age thirty-four years, a Japanese laborer, was first seen on June 27, 1932, in answer to an emergency call, sitting up in his bed with thighs flexed on abdomen and in apparent extreme pain. He was perspiring freely, his body cool and clammy, but the pulse was fairly good and there was no extreme shock. His temperature was 97.4 degrees orally. The abdomen was board-like with rigidity and extremely tender on palpation. It was necessary to give him one-quarter grain of morphin before he could be removed to the hospital.

Radiographs taken soon after admission to the hospital showed a small bubble of air under the left dome of the diaphragm (taken with the patient in erect position).

It was difficult to obtain a very detailed history as a satisfactory interpreter was not to be had. Apparently the patient had had some stomach trouble of an indefinite nature for a long time. Two days previous to this acute illness a sharp pain occurred in the upper part of his abdomen and lower right side. This was aggravated by lying down. He had several such attacks of severe pain with sweats, but was able to continue work in the lettuce fields until 10 a. m. of June 27, when he had to stop because of a severe abdominal pain. He applied hot packs, but by 2 p. m. the pain became so severe that medical attention was sought. There was no vomiting or nausea and no fever that he was aware of.

His past history was negative as far as could be ascertained. He had always enjoyed good health until the above stomach distress began. He drank heavily and was off work for two months following one of these orgies.

A diagnosis of a ruptured gastric ulcer was made and immediate surgery advised. This was refused, so the usual medical treatment was instituted. That evening his temperature rose to 100 degrees. No further doses of morphin were needed for pain until early next morning. The pain at this time was mostly confined to the upper abdomen. Pain was easily controlled by small doses. On the second day his fever ranged from 99.6 to 101.2 degrees. The pulse remained good. On the third day there was tenderness in the lower right quadrant with rebound tenderness, and less distress in the upper abdomen. The patient, however, did not either look or feel bad. Abdominal distention was only very slight. The white blood count reached 24,000. On the fourth day he complained of

pain in his chest. A few crackles could be heard in the lower left base, laterally. His temperature ranged from 98.4 to 99.2 degrees. On the next day he felt fine and there was only a faint tenderness in his abdomen. From now on he progressed very favorably, complaining only occasionally of a slight distress near the lower left sternal margin. In order to avoid expense he was discharged from the hospital on July 5, to report to the office every few days.

On July 12 he complained of a pleurisy-like pain in the left shoulder and lower left costal region. No râles could be heard in the chest and his temperature remained normal. Three days later he came to the office feeling very ill and with pain in the left lower chest. He was weak and perspiring freely. His temperature was 102.2 degrees. There was dullness in the lower half of the chest, with absent breath sounds. He was sent to the hospital, where an exploratory puncture was made in the tenth interspace, posterior axillary line. The needle was felt to penetrate more than pleura. Thick, yellow-green pus was aspirated.

On the following day he was taken to surgery. A preliminary exploration with the needle gave only straw-colored fluid. We now felt certain that the pus had been obtained after puncturing the diaphragm, and that the fluid was confined to the pleural cavity. A section of the tenth rib was resected, and further exploration with the needle through the diaphragm located pus. The wound was packed with gauze so as to stimulate adhesions and thereby wall off the pleural cavity before attempting to drain the abscess. This was done two days later. The infection was found to be well walled off and could be freely opened and drained through the diaphragm. Two rubber tube drains were inserted. Postoperative recovery was uneventful except for the development of a lung fistula, apparently due to pressure from one of the tubes. This closed spontaneously in two weeks.

Radiographs and fluoroscopic examination of the chest and stomach did not reveal any pathology on August 16. The patient was discharged in excellent condition.

COMMENT

Clinically this case fits in with the "forme fruste" type of perforated gastric ulcer as described by H. A. Singer and R. T. Vaughan. There were several days of prodromal symptoms: pain and epigastric tenderness. The pain of rupture was not quite as excruciating and the shock not as great as the classical form. The presence of air under the diaphragm offered our most definite diagnostic sign. The initial symptoms subsided rapidly. At no time was abdominal tympanites marked.

If our first exploratory puncture of the chest had not located the pus on first trial, but the pleural effusion instead, valuable time might have been lost in taking the proper surgical steps. Fortunately the pleura was not infected by withdrawal of the needle. The value of the two-stage operation in order to avoid infecting the pleural cavity is self-evident.

We feel that the end-result is most gratifying, as verified by radiographic evidence as well as clinically. The fact that no gastric lesion was demonstrated radiographically was not surprising, as it has been demonstrated by others that ulcerative lesions have healed completely following rupture.

406 Main Street.

A LARGE SUBSTERNAL ADENOMATOUS GOITER

By FRED B. MOOR, M. D.
Loma Linda

REPORT OF CASE

HISTORY.—Mrs. M. S. B., age sixty-seven, a widow, entered Loma Linda Sanitarium on September 2, 1931, complaining of a small right-sided swelling in her neck and a chronic nonproductive cough.

The patient had been exceptionally well all her life. The swelling had been noticed for about one year, but had given her little concern. In December, 1930, she suffered an attack of influenza following which she noticed a chronic nonproductive cough which remained with her continuously until her admission to the sanitarium. Recently she had had two or three attacks of choking and dyspnea. She fatigued easily and had occasional attacks of palpitation. She had lost six pounds in weight in the preceding two months.

The patient began to menstruate at the age of eleven and continued to the age of fifty-eight. Her periods were profuse and painful with an interval of twenty-eight days and a duration of seven days. She had two full-term normal pregnancies.

Physical Examination.—In general appearance the patient was an ambulatory elderly woman, somewhat plethoric, slightly cyanotic, and exhibited a brassy cough and some dyspnea even when at rest.

Head and Neck.—There was a definite exophthalmus with positive Stellwag and Von Graefe signs. The tonsils were large and inflamed, but no pus could be expressed. Laryngoscopic examination showed some atrophy of the left vocal cord and, although it was not fixed, its movement was not as great as that of the right cord.

The right lobe of the thyroid gland was considerably enlarged and rather nodular although not firm. The enlargement was continuous down behind the right clavicle. There was no apparent enlargement of the left lobe of the gland. The patient's neck was very short, rendering palpation difficult.

Chest.—The area of cardiac dullness was moderately enlarged to the left and was continuous with an area of dullness about 12 centimeters wide, extending to the upper margin of the sternum. There were no unusual sounds on auscultation over this area. There were a few moist râles in the bases of the lungs. The heart sounds were of fair quality, sometimes perfectly regular and at other times beating in triplets. There were no murmurs. The blood pressure on the right arm was 170 systolic and 70 diastolic, and on the left arm was 180 systolic and 80 diastolic. The pulse rate was 88 to 100 per minute.

Abdomen, Pelvis, Rectum, and Extremities.—Nothing significant revealed.

Laboratory Findings.—As regards basal metabolism, two tests, six days apart, gave readings of plus 17 per cent and plus 18 per cent, respectively.

Roentgen Examination.—Roentgenograms and fluoroscopic examination revealed a large nonpulsating shadow, continuous with the heart shadow, completely filling the anterior mediastinum.

Wassermann and Kahn Tests.—These were both negative.

Blood Counts.—The red cells and hemoglobin were normal. There were 4,500 white cells per cubic millimeter, with 56 per cent lymphocytes, 10 per cent transitionals, 29 per cent neutrophils, and 5 per cent eosinophils.

Blood Chemistry.—This included nonprotein nitrogen, creatinin, and sugar, which were all normal.

Urine and Stool Examinations.—These revealed nothing abnormal.

Treatment.—Left lobectomy was performed by Dr. George W. Crile at the Cleveland Clinic Hospital on September 28, 1931. The patient died the following day, when the pulse became weak and rapid and the blood pressure dropped. A blood transfusion was of temporary benefit.



Fig. 1.—Anteroposterior roentgenogram of the chest in the case of Mrs. M. S. B. Oblique picture shows the anterior mediastinum completely filled.

Pathologic Report.—This is a summary of a complete and comprehensive report kindly furnished by Doctor Crile:

"The left lobe of the gland removed at the operation weighed 190 grams, and was composed of multiple, completely encapsulated adenomata of varying size. There was very little normal thyroid tissue left.

"At necropsy the right lobe of the gland was found to measure 15 x 6 x 7 centimeters, and to weigh 310 grams. It was nodular and had many firm scarred areas. On section this lobe showed many adenomata containing colloid material, some showing recent hemorrhage.

COMMENT

The complete pathologic diagnosis follows:

1. Colloid goiter with diffuse adenomatous change.
2. Hemorrhage, postoperative, cervical, and mediastinal.
3. Hypertrophy and dilatation, heart.
4. Hydrohemothorax, bilateral.
5. Congestion, lungs and spleen.
6. Persistent thymus.
7. Fibromyoma, uterus.

Loma Linda Sanitarium and Hospital.

Venereal Disease Control Is Important.—The American Social Hygiene Association, of which Dr. William F. Snow, former secretary of the California State Board of Health, is general director, has called attention, through the National Social Work Council, to the importance of venereal disease control at the present time. The problem of treatment for venereal disease patients is becoming acute. More and more infected persons unable to pay for medical care and unable to obtain free care because the clinics are now so overcrowded are forced to discontinue treatment. Left without medical supervision, they are likely to become sources of infection to others in the community and, furthermore, they are almost certain, themselves, to lose whatever chances of cure they may now have. It is believed that the public, generally, is not aware of the present situation that exists throughout the country.

BEDSIDE MEDICINE FOR BEDSIDE DOCTORS

An Open Forum for brief discussions of the workaday problems of the bedside doctor. Suggestions of subjects for discussions invited.

IMPETIGO OF THE NEWBORN

SAMUEL HANSON, M. D., (Medico-Dental Building, Stockton).—Impetigo of the newborn is an acute contagious disease of the skin characterized by vesicles and bullae on an erythematous base. The blebs vary in size from a few millimeters to a centimeter or more in diameter. The covering is very thin—of tissue paper thinness; the surface is flaccid and puckered, except in the very early stages of development. The contents of the bullae are thin straw colored or serous. The typical lesion is decidedly vesicular rather than pustular. The red areola which encircles the vesicles is a very constant accompaniment; it is most pronounced in the immediate vicinity of the vesicle and fades away imperceptibly in the surrounding healthy skin. When the vesicle bursts a raw oozing surface is left with thin shreds of epidermis attached at the periphery, and in places undermined by the serous exudate. There is very little tendency to crust formation. The exposed base of the ruptured vesicle is very similar to the denuded surface of a second degree burn. Lesions in all stages of development are present in any one area. The surfaces of the body usually involved are those that are covered and subjected to moisture, such as the diaper area, and the deep folds of the skin, as in the neck. Usually there is little or no fever, and only slight evidence of a systemic reaction.

In the severe forms of the disease (Ritter's Disease) huge bullae develop which quickly become confluent, and on bursting leave extensive raw surfaces. There is a marked constitutional reaction, with fever, vomiting, and diarrhea; and later dehydration, and evidences of a profound toxemia.

One other diagnostic feature of the disease is its extreme contagiousness. The tendency to transmission is so great that unusually strict isolation precautions must be instituted to eradicate an epidemic from a hospital nursery. With the exception of erysipelas, impetigo is the only acute highly contagious skin disease of the newborn.

From the above description it is obvious that impetigo of the newborn is clinically very different from the same condition in the school child. In the latter the disease is only slightly contagious, and is characterized by thick oozing crusts which are usually located on the face, scalp and extremities.

In the differential diagnosis the pustular form of miliaria and the bullous type of syphiloderm are practically the only conditions to be considered. Bullous eruptions due to iodides, bullous erythema multiforme, and epidermolysis bullosa

are also mentioned in the differential diagnosis by some writers, but these dermatoses are exceedingly rare in the newborn.

In a consideration of pustular miliaria it is to be noted that the individual lesions are essentially pustules and not vesicles. The covering of the bleb is thick and tense, and there is no red areola. The lesions are not particularly limited to the diaper area but are as commonly to be found on the trunk, and even more commonly on the face. The infection is of low virulence and is not associated with any constitutional reactions. It is not contagious.

The lesions of bullous syphiloderm in some respects simulate very closely those of impetigo. They are usually, however, larger, their covering is thicker, their contents are semi-purulent from the beginning; and there is no red areola. They are distributed most commonly on the palms and soles. There are usually other evidences of luetic infection such as rhagades, snuffles, mucous patches, enlarged liver or spleen or a positive Wassermann reaction. Evidences of luetic infection in the mother may also be obtainable.

In conclusion it is well to remember that impetigo is a dangerous form of sepsis in a nursery or in close proximity to a delivery room. Hence, the obstetrician as well as the pediatrician must ever be on the alert for its early recognition. The physician will best serve the interests of his patients and his hospital if he will not hesitate in making at least a tentative diagnosis of impetigo in every instance of a vesicular or bullous eruption in the newborn, particularly if the covering of the lesions is thin and puckered, and a red areola is present.

* * *

L. F. X. WILHELM, M. D. (1680 North Vine Street, Hollywood, Los Angeles).—Periodic epidemics of impetigo contagiosa neonatorum, probably the most common dermatitis of the newborn, in recent years, seem to be more frequent in hospitals throughout the country. When such an outbreak occurs in a given hospital, it requires extreme diligence and care, and close coöperation on the part of nursing staff and attending staff to control the epidemic. Therefore, our efforts should be directed toward preventing, as far as possible, the spread of impetigo, should one case appear in the nursery.

The prognosis in a simple impetigo is usually good, especially if treatment is instituted as soon as possible after the first bullae appear. In the dermatitis exfoliativa neonatorum of Ritter, which Tamm and Gelpke consider a malignant form of impetigo contagiosa, the mortality is very high. In

simple impetigo, there are isolated bullae covering a greater or lesser extent of the body, while in the malignant form, the infection causes a more or less complete exfoliation of the skin of the entire body. The skin of the hands and feet are shed like a glove, in much the same manner as in scarlatina. The constitutional reaction of the infant is much more profound in Ritter's dermatitis exfoliativa neonatorum.

On account of the tendency of this disease to become epidemic, our efforts must be especially directed to its prevention. Orville R. Chadwell of Boston recently reported on his success in controlling this dermatitis in the New England states. Immediate isolation of infant and mother should follow the discovery of a bleb of impetigo. Chadwell found that they were able to prevent epidemics by the following procedure: Soap and water was used only once while the infant was in the hospital, and that was used to remove the vernix and blood immediately after delivery. Then the entire surface of the body was anointed vigorously with a five per cent ammoniated mercury ointment, care being taken to rub the ointment in, particularly in the axillae and groins. The face and scalp were treated with equal care. The subsequent daily care of the skin consisted of a complete and vigorous rubbing with sterile cottonseed oil. If any infant was found with a bleb it was immediately isolated, and treated with a three per cent ammoniated mercury ointment for three or four days. Using these methods, some of the New England hospitals have prevented epidemics of impetigo for three and more years. I believe a great part of the success of the above technique has been due to avoiding irritation of the skin incident to routine bathing with soap and water. We know that impetigo is prone to develop even in a microscopic abrasion.

Treatment of the disease varies. Some prefer a dry treatment consisting of swabbing the bases of the opened lesions with a five per cent solution of silver nitrate followed by the free application of Taylor's dusting powder (which contains mercurous chloride, three parts; talcum, two parts; and zinc oxide, one part).

I prefer the use of an ammoniated mercury ointment, two to five per cent, applied to the lesions once or twice daily after all the vesicles have been opened and all crusts have been removed with sterile cottonseed oil. Sub-erythema doses of ultraviolet ray and small fractional doses of x-ray not to exceed one-eighth skin unit (MacKee) are very useful in promoting a more rapid involution of the lesions. Gentian violet has found great favor, especially among the pediatricians. A two to four per cent sulphur ointment often proves of great value in stubborn cases.

In conclusion it is well to emphasize once more the desirability of preventing the spread of the infection by observing careful aseptic technique in handling the newborn infants, and by strictly isolating infant and mother, should even one suspicious bleb appear.

J. CARL CUMMINGS, M. D. (202 Professional Building, Glendale).—The primary lesion in impetigo contagiosa is the characteristic pustule. This is, at first, a small but rapidly growing purulent vesicle surrounded by a small areola of inflammation. The pustules rupture, then become dry and covered with light yellow or brownish crusts. On account of the contagiousness of the process, the lesions of impetigo soon become confluent.

On the face and around the mouth and nose they form wreath-like figures, on the scalp a dense encrusted mass. As a result of scratching the pyogenic organisms are carried to other parts of the body and new crops of the pustules appear on the hands, arms, legs and trunk.

We rarely ever see this infection in the intrascapular space as the child cannot reach it with its finger nails.

It is a remarkable fact, that in spite of the demonstrated contagiousness of impetigo, and all children having the same chance of infection, that only a certain group of them become infected. There is a possibility that the germs of impetigo can invade only the skins which react to the irritation of the infected organism by some local inflammation, to which reaction some individuals are especially and naturally predisposed.

The pyogenic cocci thrive in the products of this inflammatory process and as a result we find numerous pustules.

If the impetigo appears as an independent primary affection, the skin around the pustule shows very little change, sometimes the round crusts have the appearance of being "stuck on the skin."

In secondary impetigo an entirely different condition is found which often results either from scratching or because the skin is soiled from a previous infection such as eczema, urticaria, or strophulus.

An odd form of "impetigo contagiosa" is the ordinary ecthyma, which in contrast with the condition above described, seems to arise from the deeper layers of the skin. A hard, tensely infiltrated inflammatory nodule of a bright red color appears on the skin, a pustule develops from this nodule and usually passes through the same stages as an ordinary impetigo.

The pustules of ecthyma show no tendency to group, but are always discrete. They are most frequently seen on the extensor surfaces of the lower extremities and on the nates. This form of eruption is most frequently seen following scabies, and here scratching causes scars which persist much longer than the pale red spots following impetigo.

My observation of babies infected with impetigo during the first week of birth, is that they are usually well covered with vesicles at the time of onset of the primary affection.

I have seen more patients in institutions than I have in homes.

Regardless of complete isolation of newborn babies, it is a fact that the newborn are very susceptible to impetigo contagiosa.

CONCLUSIONS

1. Impetigo is characterized by the formation of discrete vesicular pustules.
2. Occurs most frequently upon the hands and face.
3. Patients are usually seen in groups affecting many babies in institutions.
4. The vesicles are usually one-fourth to one-half inch in diameter and are flaccid, never distended. Later the contents become slightly yellowish, then rupture and dry, forming thick yellow crusts, which have the appearance of being "stuck on," the surrounding skin being healthy. After the crusts fall off, a small red patch remains, which slowly fades.
5. The favorite seats of the eruption are the face, hands, neck, feet, legs, forearms and scalp.
6. The eruption is rarely seen on the abdomen and almost never upon the back.
7. There may be only half a dozen vesicular pustules, or from thirty to forty may be present.
8. Itching is never a prominent symptom.

Puritanism, Lack of Play, Linked with Crime, Vice.—Puritanism, leisure, and lack of normal fun and enjoyment are three factors definitely linked with vice and crime. Dr. Herman Adler, professor of psychiatry in the University of California, said today in the course of a popular lecture on "Psychiatry and Crime," delivered at the Stanford University Medical School.

"In sex, alcohol and drugs, and gambling, factors leading to vice and crime," he said, "the common denominator is restlessness and discontent caused by the damming back of natural fundamental impulses.

"The spirit of adventure which is represented by gambling is a safe one but it cannot be safely indulged in unless it is directed toward noncriminal goals. Gang activities do not furnish the only possible adventures today.

"Anything legitimate which counteracts in the individual the feeling that he is shut out and solitary, is desirable, and helps in preventing vicious demoralization. Group adventures, such as experiments in barter, are being worked out today."

Good times do not spell danger, the California psychiatrist, and formerly director, Boston Psychopathic Hospital, and professor of psychiatry in Harvard University, emphasized. It is the duty of public officials to make possible and organize such good times, the healthy use of leisure, he declared.

Fun and play are especially desirable right now, he said. Having a good time is much more desirable for the unemployed than to allow them to sit at home in solemn dejection or to wander about aimlessly in search for jobs which do not exist, he emphasized.

Drawing on his experiences as state criminologist for Illinois, and director, Institute of Juvenile Research of Chicago, the California psychiatrist pointed out that applied psychiatry can lend a helping hand in the search for safe outlets for three main human interests, indulgence in alcohol and drugs, gambling and vice.

"In the changing economic order of things," Dr. Adler said, "it is apparent that man is going to be faced with increasingly great amounts of time. Two groups will make adjustments without difficulty. The mentally low grade man will accept the situation with stolidity. The superior man, the artist, the genius, because of his great gifts, will escape, through his burning interests, the boredom of undirected activity.

"Between these two groups, however, is the great bulk of humanity, which is neither so suggestible as to follow blindly, nor so superior as to be able to ignore lack of environmental compulsion. Individuals in this

group are going to be at loose ends. As amount of leisure increases, boredom and frustration can be expected to increase."

Physical or environmental factors, on which criminal behavior is based, were given priority by Professor Adler over formerly accepted causes such as mental deficiency, insanity and the theory of the "born criminal." Just as was done in the army, during the World War, he said, psychiatry could now function in the identification of the dangerous deviates from safe behavior, and assist man to live a "balanced" life.—*University of California Clip Sheet.*

Identical Twins More Alike Than Heredity Implies.—Identical twins are not only born with greater similarities than ordinary brothers and sisters, but they tend to become more alike in youth because of the treatment accorded them by relatives and other people with whom they come in contact.

This fact is pointed out by Professor H. E. Jones and Paul T. Wilson of the University of California Institute of Child Welfare in a report to the *Journal of Experimental Education* on a study of twins just completed by them in Berkeley.

Concerning this study, Professor Jones says: "It is well known that identical twins are more similar than fraternal twins in physical appearance, height and other body measurements, intelligence and scholarship. Some investigators have thought that this greater similarity of identical twins is due wholly to heredity, and that through comparing identicals and fraternal twins it is possible to measure the effect of heredity.

"The study which we have just reported was made on the hypothesis that the greater similarity of identicals may in some traits be due to a more similar environment; that they are more likely to be treated alike, and to have similar reputations, resulting in their being brought up under traditions which emphasize and tend to maintain their similarity. A test of this was made by comparing forty pairs of identical twins with forty pairs of fraternal twins of the same sex with regard to differences in such traits as sociability, irritability, self-assertion, leadership, impulsiveness, etc. It was found that on certain traits, such as irritability and impulsiveness, members of their families reported differences quite frequently for both fraternal and identical twins, but that on traits such as sociability and imaginativeness, fewer differences were observed. It was also found that the actual number of differences was in most traits smaller among identical twins.

"It was concluded that identical twins have much more similar reputations as to personality traits, than fraternal twins; that this similarity extends to a very wide range of traits, and that it applies very unequally to different traits. These facts suggest that not merely the biological heredity but also the social environment is more similar in the case of identicals, and that this must be taken into account in the use of the twin method in studies of heredity and environment."—*University of California Clip Sheet.*

The Irish Hospitals and Sweepstakes.—The success of the Irish hospitals in financing themselves by taking advantage of the gambling spirit of the world is so great that, since the special act passed by the dail in 1930, claims by forty-eight hospitals for aid amounting to \$47,000,000 have been made and \$32,000,000 has been awarded. Receipts from previous sweepstakes funds amount to \$8,800,000. It is stated that \$14,300,000 was awarded for endowment purposes, \$15,700,000 for building works, site, mechanical plant and fees, \$1,320,000 for repayment of loans, and \$760,000 for medical, surgical and pathologic apparatus. It is announced that more hospitals will participate in subsequent sweepstakes. The claims are much in excess of the awards, some of which are considered insufficient, and in some cases amended claims are being prepared. Seven sweepstakes have been arranged to take place before July, 1934, when the special act expires.—*London News Letter (Journal of the American Medical Association).*

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Leaflet Regarding Rules of Publication.—California and Western Medicine has prepared a leaflet explaining its rules regarding publication. This leaflet gives suggestions on the preparation of manuscripts and of illustrations. It is suggested that contributors to this journal write to its office requesting a copy of this leaflet.

EDITORIALS*

C. M. A. ANNUAL SESSION—DEL MONTE, APRIL 24-27

An Annual Session Program Presents a Four-Day Postgraduate Course.—The 1933 annual session is held in a year when general economic conditions are such that few physicians are in the mood to spend money if the spending can be avoided. This financial stringency with which practically all physicians have a first-hand knowledge, is partly due to the fact that many lay citizens are refraining from calling in medical aid unless absolutely needed; and of citizens who do go to physicians, many, indeed perhaps the majority, are themselves in such straitened financial circumstances that they are not in position to pay for the professional services rendered. Inasmuch as nowadays less medical service is being called for, the conclusion may be drawn that most medical men have a bit more leisure time than formerly. That being the case, would it not be wise to take advantage of the brief but excellent postgraduate course which is offered in the four-day annual session of the California Medical Association?

* Editorials on subjects of scientific and clinical interest, contributed by members of the California Medical Association, are printed in the Editorial Comments column, which follows.

Expense of Attendance Not Necessarily Heavy. The expense of attendance need not be over-great. If railroad fare and headquarters hotel rates seem a bit appalling, why not join with and share expenses with two or three colleagues and motor to Monterey County, make your convention living headquarters at one of the hotels at Del Monte, Monterey, Carmel or Pacific Grove, attend and profit from the meetings and at the same time have the joy that goes with an outing? A list of hotels with rates is printed in this issue. (See page 286.)

* * *

The General and Scientific Programs.—Inspection of the program provided for this annual session, and which is printed in this issue of CALIFORNIA AND WESTERN MEDICINE, shows that it measures up to the high standards of recent years.

At the general sessions will be heard notable speakers from the East who will discuss freely some of the medical economic problems which have been so much in the limelight in the last five years. Our fellow Californian, Dr. Ray Lyman Wilbur, chairman of the Committee on the Costs of Medical Care, and Guest Speakers Dr. Arthur C. Christie of Washington, D. C., a signer of the Minority Report, and Dr. R. G. Leland, director of the Bureau of Medical Economics of the American Medical Association, will present viewpoints based on peculiarly intimate and first-hand knowledge of the subjects under discussion. Those presentations on the opening days will lead to much exchange of opinion between members who attend, and from such discussions good is bound to come. For list of guest speakers and program of general sessions, see page 284.

The scientific programs are likewise of high order and of broad scope and diversity, both as regards guest speakers from other states and as pertains to Californians who are on the section programs. For section programs, see page 290.

In this April issue, the complete program of the Del Monte annual session is printed. You owe it to yourself and your profession to scan it carefully. It is hoped that the various programs will appeal to you. Attention is also called to the reports of officers and committees as presented in this issue in the *Pre-Convention Bulletin*.

All formality and entertainment will be dispensed with at this year's session. The California Medical Association meets to give serious attention to the important problems which face it. Through contact with fellow physicians, those who attend are certain to receive inspiration that will help them to go back to local tasks with courageous hearts and clear minds. Every California Medical Association member who can arrange his practice to attend this year's 1933 annual session should do so. In spite of the hard times, it can and should be made one of the largest, best and most valuable sessions that the California Medical Association has ever held.

THE LEGISLATIVE SESSION CONTINUES

Progress Report Somewhat Meager in Details. The California Legislature is still in session. In past legislative years, adjournment was apt to take place in April. In the present fiftieth session, with the massive amount of economic readjustment legislation to which consideration and time must be given, it is quite likely that the legislature may still be at work in June.

It is not possible at this writing to give much authoritative information concerning the many public health measures which were listed on page 221 of the March CALIFORNIA AND WESTERN MEDICINE. It can be stated, however, that the officers of the Association and the Committees on Public Policy and Legislation of the State Association and county societies have been actively at work and probably will be in position to render a good progress report at the Del Monte annual session on April 24-27. That report will give information concerning the work thus far accomplished and will enable members of the California Medical Association to visualize the legislative situation. It may be of interest to California Medical Association members to know that, as regards some of the proposed statutes, such as the admission of nonindigents to county hospitals, the reception of the representatives of the profession at the committee hearings was most kindly.

The manner in which county societies and members can be of most efficient service in these legislative matters was outlined in the comments made on pages 183-186 of the March number of CALIFORNIA AND WESTERN MEDICINE. When the call for action is made, it is hoped that all who have definite responsibilities or who are in position to be of special aid will promptly respond.

THE SOUTHERN CALIFORNIA EARTHQUAKE

The San Francisco Earthquake of April, 1906. Recent numbers of CALIFORNIA AND WESTERN MEDICINE, in the "Twenty-Five Years Ago" column, contained several references to the San Francisco earthquake and fire, the excerpts being from the official journal of the year 1906. The California Medical Association (which at that time had the name "Medical Society of the State of California") on the day before the earthquake, under the presidency of Dr. Robert F. Rooney, opened its 1906 annual session in San Francisco. The first day's meeting was held that year in the old Y. M. C. A. building on Van Ness Avenue. The only other meeting of the Association of that session was held with two members present, one being the late Doctor Rooney (who died at the age of 90, on December 21, 1932, and whose obituary was printed in the February CALIFORNIA AND WESTERN MEDICINE) and the other being the then secretary, the late Philip Mills Jones (founder of CALIFORNIA AND WESTERN MEDICINE) who met to declare an adjourned meeting until the next year. That was how Doctor Rooney came to be president for two succeeding years, 1906 and 1907.

A Southern California Over-optimism.—The writer was one of the California Medical Association members in attendance at that 1906 San Francisco annual session. He was impressed not so much by the great fire as by the great menace to human life in earthquake zones, which could result from poor construction and fancy and overhanging cornices and ornamentation of the walls facing streets. In the *Southern California Practitioner*, of which he was the then editor, he expressed himself on this point as follows:

"... These new amendments to the building laws of Los Angeles have for their purpose the prevention of destruction of property and life by either earthquake or fire. The amendments have to do especially with the height, thickness and general construction and material of walls, and particular attention is given to the proper anchorage of chimneys, fire and other walls and partitions that rise above the surface of upper stories.

"The suggestions and proposed amendments have been duly ratified by the Council, and what little danger Los Angeles may have chanced to have been in the past, from its supposed location in a so-called earthquake zone, bids fair now to be entirely minimized or neutralized.

"It may therefore be said that Los Angeles has profited by the misfortune of San Francisco in that the latter city's awful experience has led to the adoption of building requirements in Los Angeles which ordinarily would have had little or no chance of passage."

In the light of what happened to many buildings in the recent earthquake which occurred in the Los Angeles-Long Beach area, the editor realizes that his then editorial comments were somewhat over-optimistic. For the building ordinances referred to, while good, were not as effective as was prophesied.

* * *

Adequate State Building Laws Needed.—All serious-minded Californians should be deeply grateful that the San Francisco and Long Beach-Los Angeles earthquakes occurred at hours when a minimum instead of a maximum number of citizens were on the streets. For at other hours of the day there could have been a death loss in each district that might have been ten, twenty, or thirty times as great had either temblor taken place at about the noonday hour or other time when schools and streets were crowded. The increased death and injury loss under such conditions would have resulted in major part from poorly constructed front walls, from which poorly attached stone and other material would have fallen on citizens who were afoot.

In the recent Southern California earthquake, the modern, well constructed large buildings stood the temblors quite well. But in places where local building ordinances were loosely drawn, or where political or other influences had permitted the utilization of cheaper material such as mortar, and of construction that did not comply with the building laws, the damage to even larger buildings such as schools was very evident, and could have been responsible for loss of life difficult to estimate.

That our state and cities in both instances were spared a massive loss of life should spur us on in our determination that from now on, building con-

struction in California shall be earthquake-proof in so far as it is humanly possible to make it so. Physicians, because of their profession, look upon themselves as conservators of human health and life. In these matters of earthquake-proof building laws, physicians have a double responsibility—as medical men and as citizens—and should give these proposed laws their fullest support.

In the recent Southern California earthquake it was gratifying to read the accounts of the splendid manner in which the physicians in the districts involved met the grave responsibilities which the temblors threw upon them. Having done their part with credit to themselves in that emergency, they should be equally energetic and efficient in support of laws that would prevent unnecessary loss of life in the future.

Attending Staff Services as Listed in Hospital Reports. Dr. S. S. Goldwater in a letter to the *Journal of the American Medical Association*, Vol. 99, No. 18, writes as follows: Although the annual reports of hospitals are valuable sources of information concerning certain hospital activities, they are strangely silent in relation to one of the major aspects of hospital service, namely, the gratuitous service of physicians which is bound up with ordinary hospital practice. Those who have been identified with hospital administration and have shared in the preparation of hospital reports know that the omission is due to thoughtlessness and not to any desire to conceal a vital fact in medico-social economics. Nevertheless, it is high time for hospitals to mend their ways. . . .

I can perhaps best bring out the importance of the matter by an attempt to compute roughly but conservatively the value of the free service of the imaginary hospital from whose report I have just borrowed a typical record of free service. It was assumed that the hospital in question admitted 1,000 free patients in the course of a year. Probably three-fifths, certainly one-half of this number, would be surgical cases and we should not be far out of the way if we assumed that out of 1,000 patients, 500 required major surgical operations. If we put the money value of each major surgical procedure at \$100, the surgical staff will have contributed \$50,000 worth of free surgical work. We could hardly be accused of exaggerating the value of medical service rendered in the wards if we said that the work of the staff, amounting to 12,000 days of free care of acutely sick patients, was worth \$3 a day, or \$36,000 for the year; nor would it be extravagant to assign to each of the 20,000 consultations in the outpatient department a value of \$1 a consultation, or \$20,000 for the year. Now let us add up: (1) surgical work, \$50,000; (2) ward service, \$36,000; (3) dispensary service, \$20,000. The total is \$106,000, a moderate estimate of the value of free professional service in a hospital whose parallel cash outlay amounted to only \$60,000. I am, of course, aware of the fact that \$60,000 would not, in such a case, represent the total amount contributed by the community, since it covers current expenses only and does not take into account capital outlay, which logically must be included as an additional community contribution. But after analyzing the reports of numerous hospitals in the eastern part of the country, I am prepared to say that the money value of the free service given by the staff is in many cases at least equal to the cash contributions for all purposes which are made by the community. Moreover, whatever the relative value of these two intimately associated services may be, it is important that the facts should be disclosed by hospital reports, for without them the medical economist and the legislator must remain ignorant of knowledge which is indispensable to a proper understanding of social processes and public needs.

Whether the medical profession can afford to continue its service to hospitals without being paid for

it directly (or paid for it at all) is a question that merits consideration by itself; here and there the voice of an individual or of a committee has been raised in protest, but, generally speaking, physicians thus far have eagerly sought opportunities for hospital service without pay. I hope I have shown (and it is scarcely a discovery) that the unpaid service of hospital staffs is a major element in hospital economics and that it is desirable that hospitals bring out the facts by a method of presentation to be agreed on between hospital boards and hospital staffs. A statement of free medical service in estimated dollar value, based on prevailing local rates, would probably be most readily understood by the lay public, but if an agreement cannot be reached as to a scale of money values, the work could readily be tabulated in terms of service units. In any event, the physician should be given his due!

The Number of Automobile Accidents in France.—The minister of the interior has published a report on the accidents caused in France by automobiles. The minister emphasized the shocking number of accidents, without taking account of the increasing number of cars in use and the more crowded conditions on the highways. If one takes account of these factors there has been, in a sense, a diminution of accidents. The statistics reveal much better conditions than in other countries. A survey of the accidents during the period 1924-1930 shows the following:

Years	Fatal Accidents	Total No. of Cars in Use	No. of Accidents per 100,000 Cars
1924.....	1,626	716,951	225
1925.....	2,089	868,225	240
1926.....	1,160	974,699	222
1927.....	2,379	1,208,847	197
1928.....	2,941	1,417,755	207
1929.....	3,717	1,701,680	218
1930.....	3,120	1,951,712	201

In England, last year, there were 6,696 deaths due to automobile accidents, and in the United States there were 33,600 deaths and 1,200,000 injuries. The record of France is a little lower than that of Germany. Nevertheless, the minister of the interior recommends greater severity in the examinations for drivers' licenses. The percentage of rejected applicants ranges at present between twenty and thirty, the rejections being based most frequently on an inadequate knowledge of the rules of the road. The question has been brought up again of the value of a physical examination of drivers in order to detect imperfections of eyesight or hearing, arterial sclerosis, cardiac lesions, and unstable emotions, which play an important part in most accidents in which women drivers are involved. A physical examination is already required of drivers of public vehicles, since the companies to which these belong wish to avoid having to pay too large amounts as damages, in case of accidents. A physical examination of drivers of private automobiles, while it appears desirable, has not appeared feasible, because of the immense number and the cost. A physical examination is, however, required of drivers who have been in an accident. It is thought that gradually a physical examination may be required of all new drivers by requiring them to present an insurance contract and then urging the insurance companies not to issue a contract to persons who fail to present a certificate showing a satisfactory medical examination. —Paris Letter, *Journal of the American Medical Association*.

Fungal Infection of Feet.—Henderson observed that, when shoes are left for from eight to sixty hours in a closed tin box containing a small dish of formaldehyd, the vapor effects sterilization even at room temperature. Leather absorbs considerable amounts of formaldehyd vapor, which it gives off again for many hours afterward. When shoes so treated during the night are worn during the day, a distinct amelioration or disappearance of infection of the skin may result after a time. Incidentally, the feet are also protected against reinfection from the shoes.—*Archives of Dermatology and Syphilology*.

EDITORIAL COMMENT

This department of California and Western Medicine presents editorial comment by contributing members on items of medical progress, science and practice, and on topics from recent medical books or journals. An invitation is extended to every member of the California and Nevada Medical Associations to submit brief editorial discussions suitable for publication in this department. No presentation should be over five hundred words in length.

Tropical Diseases in California.—California stands at the crossroads of Pacific Ocean commerce and passenger traffic. It is the Mecca for persons retired because of health or finances. It draws an enormous transient tourist population but at the same time geographic and climatic factors provide conditions favorable for the spread of many diseases generally supposed to be characteristic of, or limited to the tropics and sub-tropics. Insect vectors of disease are being found with increasing ease as attention is directed to these problems. Mosquitoes, biting flies and fleas have been incriminated. Mammalian and rodent reservoirs of disease have been discovered in appalling numbers, as in the case of relapsing fever, tularemia, typhus fever, plague and undulant fever. Human carriers of such diseases are known to be present and dangerous in amebiasis, bacillary dysentery and others.

Altogether, physicians are finding that California is abundantly supplied with tropical diseases and especially with potential reservoirs and means of transmission for them. Recognizing this situation and its portent for the future, the University of California has developed an original function of its Hooper Foundation for Medical Research into The Pacific Institute of Tropical Medicine to deal with just such present and impending problems.

But of greater immediate interest and more to the point is the discussion of the opportunity offered the university in the way of fields of investigation. Problems in medical investigation may be grouped roughly as general, that is, those common to all communities, or local, as those determined by some peculiar condition of climate or geographical location, local industries, or density and character of population and so forth. The geographical situation of San Francisco determines at least one of the problems which should, through its new foundation, immediately engage the attention of the University of California. The port of San Francisco, draining as it does the Orient and the Panama Canal, offers an opportunity for the study of tropical and unusual imported disease not open to any other city in the temperate zone. The intensive investigation of tropical diseases and the allied fields of protozoology and comparative pathology is sure to yield results of the greatest value to scientific medicine and will at the same time allow this university to assist the state in even greater extent than in the past, in the solution of problems concerning the health and welfare of its citizens. In this field alone the Hooper Foundation will undoubtedly

take a prominent part, active and advisory in the affairs of the community.

The thesis of these remarks is well illustrated by the striking paper in this issue by Kofoed and Donat of the University of California on the prevalence and dangers of so-called kissing bugs in California.* Their demonstrations and conclusions are of great practical importance and should be familiar to every physician in California. The same may be said for the analogous report by Larsen and Johnstone on the potentialities of Simulium flies in California in relation to the filarial eye disease, onchocercosis, now prevalent in Guatemala and Mexico.

Timely prevention is vastly better than attempted treatment, especially in such diseases as South American trypanosomiasis and onchocercosis, for which there is no specific cure and no effective treatment. California's protection lies in the vigilance of her medical profession. Physicians must be informed as to these and similar tropical disease dangers and must be on the watch for their recognition.

George Williams Hooper Foundation,
University of California.

ALFRED C. REED and
KARL F. MEYER,
San Francisco.

III†

Pleioantigenic Bacteria.—The use of bacterial vaccines as specific diagnostic, prophylactic, and therapeutic agents is logical, provided one assumes that the antigenic properties of each vaccine are qualitatively identical with the essential reacting specificities in all types, stages, and phases of the corresponding natural infection.

The newer pleomorphic bacteriology challenges the truth of this assumption. Pure cultures of the typhoid bacillus, streptococcus, pneumococcus and tubercle bacillus, for example, have been reported to "dissociate," "mutate," or pass through "phases," in which not a single original morphological, tinctorial, or antigenic property is demonstrably retained. As many as twelve morphological and tinctorial variants of certain pure cultures are alleged which, on specific serological analyses, fall into at least three apparently distinct antigenic groups. Judged solely from these serological data, the three groups might be classed as the etiological factors of at least three widely different infectious diseases.

It is estimated that at least half of the typhoid vaccines of the last quarter-century were grown or prepared under conditions from which bacteri-

* See page 245.

† Part I of this series was printed in the February CALIFORNIA AND WESTERN MEDICINE; Part II in March, page 188.

ologists today would expect only "nonimmunizing phases." Future refinements in vaccination technique, therefore, may more than double the demonstrable value of numerous specific prophylactic agents.

Equally important antigenic "mutations," "variations" or "transformations" take place in the animal body. Injected into dogs and ferrets, for example, the filterable virus of canine distemper is reported to change or to be changed into two qualitatively distinct vaccination specificities.¹ Neither the canine nor the ferret splenic variant is an effective specific prophylactic vaccine with the other animal species. Antigenic differences have also been reported between staphylococci isolated from different organs at the same human autopsy. Under certain experimental conditions, pneumococci are "activated" in the animal body into wholly new type specificities.² Primary and tertiary antigenic phases of *T. pallidum* have been isolated from clinical cases.³

From present immunochemical data, specific test-tube vaccines and vaccines derived from lower animal species are purely empirical therapeutic gambles. The fact that a proposed vaccine will effectively immunize rabbits against multiple lethal doses of the corresponding test-tube culture does not influence the therapeutic uncertainty, unless supplemented by convincing evidence that all anti-human, mucous membrane, interstitial and septicemic phases of this infectious agent are qualitatively identical with the test-tube culture. There is not today a single pathogenic microorganism whose stability, lability and other pleoantigenic properties are known in sufficient detail to furnish such evidence.

Until such details are available, physicians must use all proposed specific vaccines with an open mind, equally prepared for clinical success and therapeutic failure. This does not apply, of course, to specific vaccines used for purely psychological effects or as convenient agents for the production of "nonspecific protein reactions."

Stanford University.

W. H. MANWARING,
Palo Alto.

School Health.—In these times of stress and universal unrest all public institutions are being carefully scrutinized as to the essential need for their activity. Therefore, we must discriminate carefully between those which serve a vital human need and those which do not. School health work requires no defense, as it has been accepted and approved by the civilized world for a century. It is the most important phase of our educational program. Without health supervision education cannot endure. In these days of economic strain school health supervision is more essential than ever.

As organized in Los Angeles, it provides for all school children a periodic health examination to the end that they may profit by the education they receive and in the course of which thousands of

physical defects are discovered which would otherwise have remained undetected. This work is highly effective because it is conducted by physicians, dentists, nurses, and specially trained physical education teachers who have had years of special training in school health work; men and women who have devoted themselves to this specialty largely because of their intense interest in it. They have made a study of the normal child, and they are specially qualified to detect slight deviations from normal; they are more interested in preventing disease than in curing it.

Their service in preventing juvenile delinquency and crime, in correcting postural defects, in controlling the spread of contagion, and infectious skin diseases, in forestalling backwardness by placing glasses on defective eyes, preventing deafness, giving advice on malnutrition, and in scores of other ways keeping our school children as near fit as possible, cannot be measured in dollars and cents. The great majority of children would receive no medical supervision except in cases of acute illness were it not for the school physician's examination and the nurse's inspection.

Those children whose parents cannot pay a physician are taken care of at the Parent-Teacher Association's health centers and other clinics; those who are able to pay the physician consult him much oftener because of the school health worker's activities. Thousands of children are referred to the family doctor for the correction of previously undiscovered defects. It must be clearly understood that school health work is not curative medicine, but preventive medicine.

If this service were further curtailed it would be the most unfortunate policy a community could possibly adopt. It would set us back many years. The results in increased disabilities would persist into the coming generations. We see daily the children from other cities and towns where school health work is inadequate. These children often show the sad results of uncorrected defects; such cases are rare in children born in Los Angeles.

During the World War a large percentage of our youth were rejected because of uncorrected physical defects that should have been attended to in childhood. We should not permit a repetition of this terrible blunder. The birthright of our children must not be destroyed. As a measure of ultimate economy, proper child care must be given now even though other important activities must be sacrificed. Have we less foresight and less humanity than the ancient Greeks and Romans, who during their days of glory and physical perfection, in times good and bad, gave first place to the health supervision of their children, whom they considered more precious than gold or anything else in the structure of the state? In times of depression we must not relax our vigilance for the health of the future generations, for then we will be a long time paying for our folly, and we will also be responsible for untold suffering of our future citizens.

358 South Citrus Avenue.

SVEN LOKRANTZ, M. D.,
Los Angeles.

¹ Laidlaw, P. P., and Dunkin, G. W.: Jour. Comp. Path. and Therap., 41:1, 209, 1928.

² Alloway, J. L.; Jour. Exper. Med. 55:91, 1932.

³ Artificial Neurotrophic Syphilis, J. A. M. A., 96:119, 1931.

PROGRAM

THE SIXTY-SECOND ANNUAL SESSION *of the* CALIFORNIA MEDICAL ASSOCIATION

TO BE HELD AT

HOTEL DEL MONTE, DEL MONTE

APRIL 24-27, 1933

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William H. Geistwelt, San Diego	1933
R. Manning Clarke (Chairman), Los Angeles	1934
Clifford Sweet, Oakland	1935

Committee on Extension Lectures

J. Homer Woolsey, San Francisco	1933
Robert T. Legge (Chairman), Berkeley	1934
James F. Churchill, San Diego	1935
The Secretary	Ex officio

Committee on Health and Public Instruction

W. R. P. Clark, San Francisco	1933
Langley Porter, San Francisco	1934
Fred B. Clarke (Chairman), Long Beach	1935

Committee on History and Obituaries

Emmet Rixford, San Francisco	1933
George D. Lyman, San Francisco	1934
Charles D. Ball (Chairman), Santa Ana	1935
The Secretary	Ex officio
The Editor	Ex officio

Committee on Hospitals, Dispensaries, and Clinics

Wallace Dodge, Los Angeles	1933
Karl L. Schaupp, San Francisco	1934
John C. Ruddock (Chairman), Los Angeles	1935

Committee on Industrial Practice

Mott H. Arnold, San Diego	1933
Daniel Crosby (Chairman), Oakland	1934
Morton R. Gibbons, San Francisco	1935

Committee on Medical Defense

Fred R. DeLappe, Modesto	1933
Henry Snure, Sr. (Chairman), Los Angeles	1934
George G. Reinle, Oakland	1935

*Deceased.

(Continued on Page 282)

GUEST SPEAKERS AT THE SIXTY-SECOND ANNUAL SESSION CALIFORNIA MEDICAL ASSOCIATION

Speakers at First General Meeting



ARTHUR C. CHRISTIE
Washington, D. C.



R. G. LELAND
Director, Bureau of Medical Economics,
American Medical Association,
Chicago, Illinois



RAY LYMAN WILBUR
President of Stanford University
Chairman of the Committee on the Costs of Medical Care

GUEST SPEAKERS AT THE SIXTY-SECOND ANNUAL SESSION

CALIFORNIA MEDICAL ASSOCIATION

Speakers at Third General Meeting



HARVEY B. STONE
Baltimore, Maryland



CYRUS C. STURGIS
Professor of Internal Medicine, University of
Michigan Medical School, Ann Arbor,
Michigan

SECTION OFFICERS



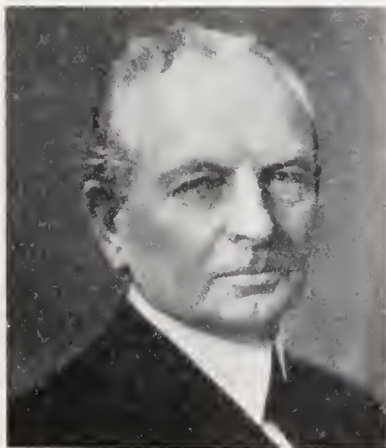
CAROLINE B. PALMER
Chairman, Anesthesiology



LAURENCE TAUSSIG
Chairman, Dermatology and
Syphilology



ISAAC H. JONES
Chairman, Eye, Ear, Nose, and
Throat



JOHN MILLER WILSON
Secretary, Anesthesiology



CHARLES J. LUNSFORD
Secretary, Dermatology and
Syphilology



J. ROY JONES
Secretary, Eye, Ear, Nose, and
Throat

SECTION OFFICERS



R. MANNING CLARKE
Chairman, General Medicine



HAROLD BRUNN
Chairman, General Surgery



JOHN N. OSBURN
Chairman, Industrial Medicine
and Surgery



FRED H. KRUSE
Secretary, General Medicine



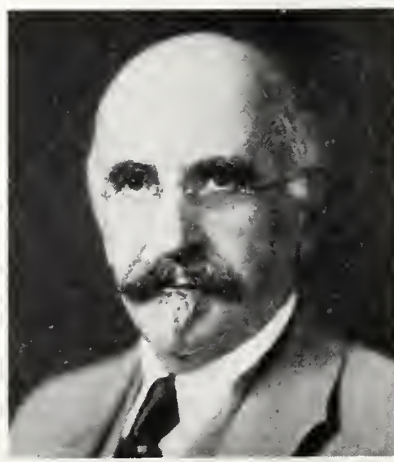
E. ERIC LARSON
Secretary, General Surgery



WILLIAM S. KISKADDEN
Secretary, Industrial Medicine
and Surgery



CHARLES L. ALLEN
Chairman, Neuropsychiatry



E. M. LAZARD
Chairman, Obstetrics and
Gynecology



FREDERICK PROESCHER
Chairman, Pathology and
Bacteriology

SECTION OFFICERS



H. DOUGLAS EATON
Secretary, Neuropsychiatry



EMIL J. KRAHULIK
Secretary, Obstetrics and
Gynecology



GEORGE D. MANER
Secretary, Pathology and
Bacteriology



WILLIAM M. HAPP
Chairman, Pediatrics



HENRY SNURE
Chairman, Radiology



JAMES C. NEGLEY
Chairman, Urology



HENRY E. STAFFORD
Secretary, Pediatrics



ROBERT S. STONE
Secretary, Radiology



LEWIS MICHELSON
Secretary, Urology

OFFICERS AND COMMITTEES, 1933

(Continued from Page 277)

Committee on Medical Economics

Daniel Crosby, Oakland.....	1933
Lyell C. Kinney, San Diego.....	1934
John H. Graves (Chairman), San Francisco.....	1935

Committee on Medical Education and Medical Institutions

George G. Hunter, Los Angeles.....	1933
H. A. L. Ryfkogel, San Francisco.....	1934
George Dock (Chairman), Pasadena.....	1935

Committee on Membership and Organization

Jesse W. Barnes, Stockton.....	1933
LeRoy Brooks, San Francisco.....	1934
Harry H. Wilson (Chairman), Los Angeles.....	1935
The Secretary	Ex officio

Committee on Publications

Frederick F. Gundrum, Sacramento.....	1933
Percy T. Magan (Chairman), Los Angeles.....	1934
Ruggles A. Cushman, Talmage.....	1935
The Secretary	Ex officio
The Editor	Ex officio

Committee on Public Policy and Legislation

Fred R. Delappe, Modesto.....	1933
William Duffield, Los Angeles.....	1934
Junius B. Harris (Chairman), Sacramento.....	1935
The President	Ex officio
The President-Elect	Ex officio

Committee on Scientific Work

F. M. Pottenger, Monrovia.....	1933
Lemuel P. Adams, Oakland.....	1934
John Homer Woolsey, San Francisco.....	1935
Fred H. Kruse, Secretary of Section on General Medicine	Ex officio
E. Eric Larson, Secretary of Section on General Surgery	Ex officio
Emma W. Pope (Chairman)	Ex officio

Committee on Public Relations

The Committee on Public Relations consists of the chairmen of the following standing committees and of certain general officers of the Association, all serving ex officio. The chairman of the committee is Dr. Charles A. Dukes, the secretary is Dr. Emma W. Pope. The director of the Department of Public Relations is Dr. Walter M. Dickie.

Fred B. Clarke, Chairman, Committee on Health and Public Instruction.

John C. Ruddock, Chairman, Committee on Hospitals, Dispensaries, and Clinics.

Daniel Crosby, Chairman, Committee on Industrial Practice.

Harry H. Wilson, Chairman, Committee on Membership and Organization.

John H. Graves, Chairman, Committee on Medical Economics.

Junius B. Harris, Chairman, Committee on Public Policy and Legislation.

Charles A. Dukes, Chairman, Cancer Commission.

Joseph M. King, President of the California Medical Association.

George G. Reinle, President-Elect.

Emma W. Pope, Secretary-Treasurer.

Communications for the Public Relations Department should be addressed to the director, Dr. Walter M. Dickie, Room 2039, Four Fifty Sutter Street, San Francisco.

Cancer Commission

Harold Brunn, San Francisco.....	1933
Henry J. Ullmann, Santa Barbara.....	1933
Clarence G. Toland, Los Angeles.....	1933
Charles A. Dukes (Chairman), Oakland.....	1934
Lyell C. Kinney (Vice-Chairman), San Diego.....	1934
Alson R. Kilgore (Secretary), San Francisco.....	1934
William Ophüls, San Francisco.....	1935
Orville Meland (Secretary for Southern Section, Los Angeles	1935
A. Herman Zeiler, Los Angeles.....	1935

Communications for the Cancer Commission should be addressed to the secretary, A. R. Kilgore, M. D., Room 2039, 450 Sutter Street, San Francisco.

SPECIAL COMMITTEES

Special Committee on Clinical and Research Prizes

George Dock (Chairman), Pasadena.....	1933
Eugene S. Kilgore, San Francisco.....	1934
Arthur L. Bloomfield, San Francisco.....	1935

Each year the California Medical Association offers two prizes of \$150 each, with certificates of award, for the two best papers on clinical and research subjects. Full information concerning the conditions laid down in these competitions may be had by addressing the Association secretary.

Committee on Arrangements—Del Monte Annual Session

William Gratiot (Chairman), Monterey.

Spencer Hoyt, Pacific Grove.

John A. Merrill, Monterey.

Alfred L. Phillips, Santa Cruz.

T. Henshaw Kelly, San Francisco.

REGISTRATION INFORMATION

Registration and Information.—The registration and information desk is located in the lobby, Hotel Del Monte. All persons attending the convention, whether members or not, are requested to register immediately on arrival. Beginning Monday, April 24, registration secretaries will be on duty daily from 9 a. m. until 5 p. m.

Programs and "Pre-Convention Bulletin."—The registration clerks will give to every member a copy of the program. Every delegate and alternate will also receive a copy of the "Pre-Convention Bulletin."

Membership Cards.—Every member in good standing in the California Medical Association has been issued an official membership card for 1933. Membership cards must be shown at the registration desk.

Guests and Visitors.—All guests and visitors are requested to register. All general meetings and scientific meetings are open to visitors and guests.

Badges.—Four kinds of badges will be issued by the registration bureau:

1. **Members.**—Only active, associate, retired or honorary members of the California Medical Association will be issued the usual membership badge. Members must show membership cards when they register.

2. **Guests.**—A guest badge will be issued to all fraternal delegates, visiting physicians, wives of members, and technical specialists who are attending the 1933 session.

3. **Delegates and Alternates.**—The usual official badge for each delegate and alternate is provided for this purpose, and will be issued only to one authorized to wear it.

4. **Officers.**—An official badge is provided for all officers and members of the Council.

Suggestions and Constructive Criticism.—The officers and committees have tried to do everything possible to make the session a success. Suggestions and constructive criticism calculated to make future sessions more useful will be welcomed by any of the officers. Complaints of whatever character should be promptly made to the registration desk, where they will receive attention.

DINNERS AND LUNCHEONS

See Bulletin Boards for Other Announcements

Official Dinners and Luncheons

President's Dinner.—Tuesday evening, 7:30 p. m., in main dining room, Hotel Del Monte. Entertainment in the auditorium follows the dinner.

State and County Officers' Luncheon.—All county officers, and officers, councilors and standing committeemen of the California Medical Association are invited to a luncheon on Tuesday, April 25, at 1 p. m., in the Copper Cup Room.

Committee on Scientific Work.—The Committee on Scientific Work will meet at luncheon on Wednesday, April 26, in the small dining room off the main dining hall.

Fraternity Gatherings.—The Nu Sigma Nu will hold a reception for members and their families at 6:30 p. m., one hour before the President's dinner. Room will be announced on registration blackboard. It will be good to see one another again.

MEMBERSHIP, 30th ANNUAL SESSION OF HOUSE OF DELEGATES

DELEGATES—EX-OFFICIO (21)

Joseph M. King, Los Angeles.....President
George G. Reinle, Oakland.....President-Elect
Emma W. Pope, San Francisco.....Secretary-Treasurer
Edward M. Pallette, Los Angeles.....
.....Speaker of the House of Delegates
John H. Graves, San Francisco.....
.....Vice-Speaker of the House of Delegates
George H. Kress, Los Angeles.....Editor
W. W. Roblee, Riverside (1935).....Councilor 1st District
William Duffield, Los Angeles (1933).....Councilor 2nd District
Henry J. Ullmann, Santa Barbara (1934).....
.....Councilor 3rd District
Fred R. DeLappe, Modesto (1935).....Councilor 4th District
Alfred L. Phillips, Santa Cruz (1933).....Councilor 5th District
Karl L. Schaupp, San Francisco (1934).....
.....Councilor 6th District
Oliver D. Hamlin, Oakland (1935).....Councilor 7th District
Robert A. Peers, Colfax (1933).....Councilor 8th District
Henry S. Rogers, Petaluma (1934).....Councilor 9th District
George G. Hunter, Los Angeles (1935).....Councilor-at-Large
Harry E. Zaiser, Orange (1933).....Councilor-at-Large
William H. Kiger, Los Angeles (1934).....Councilor-at-Large
Morton R. Gibbons, San Francisco (1935).....
.....Councilor-at-Large
T. Henshaw Kelly, San Francisco (1933).....
.....Councilor-at-Large
Junius B. Harris, Sacramento (1934).....Councilor-at-Large

ELECTED DELEGATES (120)	
Delegates	Alternates
Alameda County (9)	
Lemuel P. Adams	Dorothy Allen
Frank S. Baxter	Leonard Barnard
N. Austin Cary	William Channell
Charles A. Dukes	Lloyd Kindall
Edward N. Ewer	T. C. Lawson
Robert A. Glenn	Donald D. Lum
Henning Koford	Ergo A. Majors
Albert M. Meads	William H. Sargent
Frank R. Makinson	Harold G. Trimble
Butte County (1)	
Frank M. Whiting	H. O. Ellis
Contra Costa County (1)	
U. S. Abbott	S. N. Weil
Fresno County (3)	
T. F. Madden	George Walker
R. W. Dahlgren	Neil Jorgensen
George Sciaroni	Hyman Ginsberg
Humboldt County (1)	
C. Lane Falk	Orris R. Myers
Imperial County (1)	
No name received	No name received
Kern County (2)	
F. J. Gundry	E. A. Schaper
P. J. Cuneo	A. R. Moodie
Lassen-Plumas County (1)	
George S. Martin	G. R. Fortson
Los Angeles County (38)	
Eliot Alden	Edwin S. Bennett
John V. Barrow	B. C. Davies
E. W. Barton	Kenneth S. Davis
Fred B. Clarke	Walter Holleran
Robert V. Day	John L. Kirkpatrick
Wallace Dodge	Harry W. Martin
Paul Ferrier	H. G. McNeil
E. W. Hayes	E. E. Moody
Walter L. Huggins	John P. Nuttall
Elmer E. Kelly	J. J. O'Brien
E. Eric Larson	George Piness
Leo J. Madsen	Carl W. Rand
Percy T. Magan	Joseph K. Swindt
William R. Molony, Sr.	R. G. Taylor
W. S. Mortensen	R. A. Terry
Thomas C. Myers	Roy Thomas
Philip Stephens	George Thomason
Charles T. Sturgeon	John Vruwink
David Thomson	H. G. Westphal
C. G. Toland	H. J. Wiley
Peter H. Blong	C. Max Anderson
John H. Breyer	Joseph T. Axline
Harry V. Brown	Walter A. Bayley
R. Manning Clarke	O. W. Butler
William H. Daniel	Egerton Crispin
John Dunlop	John W. Crossan
Scott D. Gleeten	Philip S. Doane
Orrie E. Ghrist	Newton Evans
Lowell S. Goin	William W. Hutchinson
Carl R. Howson	Lyle G. McNeile
I. M. Klein	James F. Percy
George D. Maner	F. M. Pottenger
Robert E. Ramsay	Eleanor Seymour
John C. Ruddock	John W. Shuman
A. J. Scott	F. C. Swearingen
Leroy B. Sherry	Hiram B. Tebbetts
Henry Snure	Walter Wessels
Harry H. Wilson	A. H. Zeiler
Marin County (1)	
Chester A. DeLancey	L. L. Stanley

Delegates	Alternates
Mendocino County (1)	
R. A. Cushman	Royal Scudder
Merced County (1)	
F. O. Lien	B. E. McDowell
Monterey County (1)	
R. A. Kocher	W. M. Gratiot
Napa County (1)	
M. M. Booth	D. H. Murray
Orange County (3)	
Dexter R. Ball	Willis P. Baker
John I. Clark	Harry G. Huffman
John Luther Maroon	Rowland P. Yeagle
Placer County (1)	
William M. Miller	C. E. Lewis
Riverside County (2)	
H. S. Faris	A. L. Bramkamp
T. A. Card	C. E. Atkinson
Sacramento County (3)	
Philip G. Young	Maurice A. Hopkins
Edward S. Babcock	H. M. Kanner
Nathan G. Hale	Leo W. Farrell
San Benito County (1)	
R. L. Hull	E. E. McKay
San Bernardino County (3)	
G. S. Landon	A. T. Gage
C. L. Emmons	C. F. Whitmer
H. G. Hill	S. B. Richards
San Diego County (5)	
Fraser L. Macpherson	Frank St. Sure
Clarence E. Rees	W. D. Rolph
Donald K. Woods	W. O. Weiskotten
W. H. Barrow	George D. Huff
C. O. Tanner	Roy M. Ledford
San Francisco County (17)	
Philip H. Arnot	LeRoy Brooks
Elbridge J. Best	C. Latimer Callander
Edwin L. Bruck	Elizabeth A. Davis
Harold Brunn	G. D. Delprat
Edward C. Bull	William Dock
Howard W. Fleming	Randolph G. Flood
Philip K. Gilman	Emile Holman
Irving S. Ingber	Alexander S. Keenan
William J. Kerr	Robert C. Martin
Alson R. Kilgore	Stanley H. Mentzer
George W. Pierce	John J. Loutzenheiser
Langley Porter	Lewis Michelson
George K. Rhodes	Kaspar Pischel
Emmet Rixford	Philip H. Pierson
Edward B. Towne	H. A. L. Ryfkogel
J. Homer Woolsey	I. Walton Thorne
Rodney A. Yoel	William C. Voorsanger
San Joaquin County (2)	
Dewey R. Powell	C. A. Broadbuss
George H. Sanderson	R. T. McGurk
San Luis Obispo County (1)	
H. S. Walters	James M. Marshall
San Mateo County (2)	
William H. Murphy	Howard Mawdsley
Hartzell H. Ray	H. Wade Macomber
Santa Barbara County (2)	
Hugh Freidell	Rexwald Brown
Richard D. Evans	H. E. Henderson
Santa Clara County (4)	
C. M. Burchfiel	James P. Lovely
E. P. Cook	George L. Barry
A. A. Shufelt	R. Stanley Kneeshaw
C. K. Canelo	Edward Liston
Santa Cruz County (1)	
L. M. Liles	F. P. Shenk
Shasta County (1)	
Ferdinand Stabel	B. F. Saylor
Siskiyou County (1)	
Charles C. Dickinson	Victor Hart
Solano County (1)	
Philip B. Fry	John W. Green
Sonoma County (1)	
J. Leslie Spear	J. Walter Seawell
Stanislaus County (1)	
R. S. Hiatt	E. F. Hagedorn
Tehama County (1)	
F. J. Bailey	J. H. Belyea
Tulare County (1)	
H. G. Campbell	S. S. Ginsburg
Tuolumne County (1)	
H. D. Rose	G. C. Wrigley
Ventura County (1)	
Sterling Clark	Grundy Coffey
Yolo-Colusa-Glenn County (1)	
Charles F. Keith	Thomas E. Cooper
Yuba-Sutter County (1)	
E. E. Gray	F. W. Didier

I—GENERAL MEETINGS

All General Meetings will be held in the Auditorium

FIRST GENERAL MEETING

Monday, April 24, 10:30 a. m.

JOSEPH M. KING, M. D., *President*, Presiding Officer

1. *Invocation*—Rev. Ernest Bradley, Rector of Del Monte Episcopal Church.
2. *Address of Welcome*—John P. Sandholt, M. D., Mayor of Monterey.
3. *Medicine at the Cross Roads*—Ray Lyman Wilbur, M. D., Palo Alto.
4. *The Significance to the Medical Profession of the Report of the Committee on the Costs of Medical Care*—Arthur C. Christie, M. D., Washington, D. C.
5. *New Forms of Medical Practice*—R. G. Leland, M. D., Director of Bureau of Medical Economics, American Medical Association, Chicago.

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SECOND GENERAL MEETING

Tuesday, April 25, 11:30 a. m.

CHARLES A. DUKES, M. D., *Chairman of Committee on Public Relations*, Presiding Officer

1. *Alameda County Plan for the Care of Indigent and Part-Pay Patients*—George G. Reinle, M. D., Oak-

land, President-Elect of California Medical Association.

2. *San Diego County Medical Association Plan for Medical Service*—Hall S. Holder, M. D., San Diego.
3. *Discussion*—By A. C. Christie, M. D., Washington, D. C., and R. G. Leland, M. D., Chicago.
4. *Twelve Years in Organized Group Practice as Related to the Majority Recommendations of the Committee on the Costs of Medical Care*—Rexwald Brown, M. D., Santa Barbara.

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THIRD GENERAL MEETING

Wednesday, April 26, 11:30 a. m.

GEORGE G. REINLE, *President-Elect*, Presiding Officer

1. *The Nature of Pernicious Anemia and a Consideration of Recent Advances in the Treatment of the Disease*—Cyrus C. Sturgis, Professor of Internal Medicine, University of Michigan Medical School, Ann Arbor, Michigan.
2. *Living Grafts of Endocrine Glands*—Harvey B. Stone, M. D., Baltimore, Maryland.

II—HOUSE OF DELEGATES MEETINGS

30th ANNUAL SESSION

Bali Room, Hotel Del Monte

PROGRAM OF FIRST MEETING

Monday, April 24, 8 p. m.

Members of the California Medical Association who attend are requested not to take seats reserved for delegates, in order to avoid confusion when votes are being taken.

Order of Business

1. Call to order.
2. Announcement by the Speaker on personnel of:
 - (a) Credentials Committee: Lemuel P. Adams, Oakland; Charles T. Sturgeon, Los Angeles; Dexter R. Ball, Santa Ana.
 - (b) Reference Committee on Reports of Officers and of Standing Committees: Alson Kilgore, San Francisco; E. Eric Larson, Los Angeles; William Dock, San Francisco.
 - (c) Reference Committee on Resolutions and on New and Miscellaneous Business: William R. Molony, Sr., Los Angeles; Irving S. Ingber, San Francisco; Thomas A. Card, Riverside.
3. Report of Credentials Committee.
4. Roll Call.
5. Address of President Joseph M. King.
6. Report of the Council, Oliver D. Hamlin, Chairman.
7. Report of the Auditing Committee, T. Henshaw Kelly, Chairman.
8. Report of the Secretary-Treasurer, Emma W. Pope.
9. Report of the Editor, George H. Kress.
10. Report of the General Counsel, Hartley F. Peart.
11. Report of the Chairman of the Committee on Public Relations, Charles A. Dukes.
12. Report of the Chairman of the Cancer Commission, Charles A. Dukes.
13. Report of the Board of Trustees of the California Medical Association, O. D. Hamlin, President.
14. Unfinished business.
 - (a) Amendments to Constitution.
15. New business. (Introduction of resolutions.)
16. Reading and adoption of minutes.
17. Adjournment.

PROGRAM OF SECOND MEETING

Wednesday, April 26, 8 p. m.

Members of the California Medical Association who attend are requested not to take seats reserved for delegates, in order to avoid confusion when votes are being taken.

Order of Business

1. Call to order.
2. Roll call.
3. Announcement of meeting place of 1934 annual session.
4. Election of:
 - (a) President-Elect.
 - (b) Speaker of House of Delegates.
 - (c) Vice-Speaker of House of Delegates.
 - (d) Councilors.

Second District—Incumbent, William Duffield, Los Angeles (1933).

Fifth District—Incumbent, Alfred L. Phillips, Santa Cruz (1933).

Eighth District—Incumbent, Robert A. Peers, Colfax (1933).

Councilors-at-Large—Incumbents:

Harry E. Zaiser, Orange (1933).

T. Henshaw Kelly, San Francisco (1933).
 - (e) Delegates and Alternates to American Medical Association for sessions 1934-1935. Incumbents of sessions 1932-1933 are:

Delegates	Alternates
Dudley Smith	LeRoy Brooks
Oakland	San Francisco
William Duffield	William H. Gilbert
Los Angeles	Los Angeles
F. C. E. Mattison	Fred B. Clarke
(deceased)	Long Beach
Pasadena	Charles D. Lockwood*
5. Approval of members of standing committees elected by the Council.
6. Report of Reference Committee on Reports of Officers and Standing Committees.
7. Report of the Reference Committee on Resolutions and on New and Miscellaneous Business.
8. Presentation of President.
9. Presentation of President-Elect.
10. Reading and adoption of minutes.
11. Adjournment.

* Deceased. Note.—The late Charles D. Lockwood was alternate for 1933-1934 to Delegate Carl R. Howson.

III—OFFICIAL MEETINGS

Hours and Places Where Held

MEETINGS

General Meetings

All general meetings will be held in the auditorium.
Monday, 10:30 to 12:30 p. m.—Addresses by invited guest speakers.
Tuesday, 11:30 a. m. to 1 p. m.—Medical Economics meeting.
Wednesday, 11:30 a. m. to 1 p. m.—Addresses by invited guest speakers.

Meetings of the House of Delegates

Monday and Wednesday evenings, April 24 and 26, at 8 p. m. in Bali Room, Hotel Del Monte.

Council Meetings

All meetings of the Council will be held in Room 723.
First meeting, Sunday, April 23, 8 p. m.
Second meeting, Monday, April 24, 2:30 p. m.

Third meeting, Tuesday, April 25, 2:30 p. m.
Fourth meeting, Wednesday, April 26, 2:30 p. m.
Fifth meeting, Thursday, April 27, 9 a. m.

Meeting of Committee on Scientific Work

Members will meet at luncheon on Wednesday, April 26, in the small dining-room off the main dining-hall.

Section Meetings

These are given under major heading "VIII—Section Meetings," which follows.

Organization Meetings of All Standing Committees

Members of all Standing Committees are urged to contact one another and to meet and organize for the coming year by the election of a chairman and secretary, and appointment of advisory members; and to discuss plans for the next year's work.

Table I—Time and Places of Various Meetings and Entertainment

Sunday April 23	8 p. m.	Council (Room 723).
Monday April 24	10:30 a. m.-1 p. m. 2:30-5 p. m. 2:30 p. m. 8 p. m.	First General Meeting (Auditorium). Section Meetings. (For Section Meetings, see Table 2.) Council (Room 723). First House of Delegates Meeting (Bali Room).
Tuesday April 25	8:30-11:30 a. m. 11:30 a. m.-1 p. m. 1 p. m. 2:30 p. m. 7:30 p. m.	Section Meetings. General Meeting (Auditorium). Luncheon for State and County Officers of California Medical Association (Copper Cup Room). Council (Room 723). Dinner and Entertainment in honor of the President (Main Dining Room and Auditorium).
Wednesday April 26	8:30-11:30 a. m. 11:30 a. m.-1 p. m. 1 p. m. 2:30 p. m. 8 p. m.	Section Meetings. General Meeting (Auditorium). Luncheon for Committee on Scientific Work (Small Dining Room). Council (Room 723). Second House of Delegates Meeting (Bali Room).
Thursday April 27	8:30-11:30 a. m. 9 a. m.	Section Meetings. Council (Room 723).

Table II—Time and Places of Section Meetings

	Auditorium	Bali Room	Copper Cup Room	Tower Room	Club Room	Private Dining Room	Sun Porch	Children's Play Room No. 2
Monday April 24 2-5 p. m.	Medicine	Surgery	Obstetrics and Gynecology	Urology	Radiology	Dermatology	Anesthesiology	Pathology
Tuesday April 25 8:30-11:30 a. m.	Medicine	Surgery (Joint meeting with Radiology) Dr. Stone	Obstetrics and Gynecology	Urology	Anesthesiology	Dermatology		Pathology
Wednesday April 26 8:30-11:30 a. m.	Medicine (Joint meeting with Pathology) Dr. Sturgis	Surgery	Pediatrics	Eve, Ear, Nose and Throat	Neuropsychiatry	Industrial Medicine and Surgery		
Thursday April 27 8:30-11:30 a. m.	Medicine	Surgery	Pediatrics	Eye, Ear, Nose and Throat	Neuropsychiatry	Industrial Medicine and Surgery		

Auditorium, Bali Room, Copper Cup, Club Room, and Children's Play Room No. 1 are located on the ground floor. Arrows at the foot of stairway indicate location of rooms.
The Tower Room is reached by the elevator off the main lobby. The Sun Porch is off the main lobby.
The Private Dining Room is off the Main Dining Room.

IV—SCIENTIFIC EXHIBITS

Exhibits in Viewing-Boxes

(a) *Bone Changes of Hyperthyroidism*—John Dexter Camp, M. D., Mayo Clinic, Rochester.

Many bone changes that have heretofore been unexplained have recently been found to be due to hyperparathyroidism. These consist chiefly of a diffuse rarefaction of the bone with subperiosteal cyst-like areas and at times the typical changes of osteitis fibrosis cystica. The exhibit of two hundred films demonstrates those changes which have been proved to be associated with over- or abnormal activity of the parathyroids.

(b) Exhibit by the Department of Public Health, San Francisco Hospital. By E. Rosencrantz, M. D., San Francisco.

1. Pneumokoniosis from various sources.
2. Caseous pneumonias with and without atelectasis—all proven by autopsy.
3. Chronic pulmonary tuberculosis showing healing.
4. Chronic pulmonary tuberculosis with unusual caritation.
5. Chronic pulmonary tuberculosis with cold abscess of thorax (over two years' duration) proven by autopsy.
6. Chronic pulmonary tuberculosis—hilum form.
7. Multiple bone lesions with sinuses—cured.
8. Congenital cyst of the lung.
9. Gangrene of the lung.
10. Tuberculous hydropneumothorax—cured.

The Healing of Bone Following Injury and Infection

Keene O. Haldeman, M. D.
350 Post Street, San Francisco

An experimental and clinical study in five parts:
(1) The healing of simple fractures. (2) The rôle of

periosteum in the healing of fractures. (3) A comparison of various types of bone grafts. (4) The influence of bone salts on the repair of bone. (5) Osteomyelitis. (a) Experimental. (b) Clinical.

Roentgen-ray and microscopic pictures mounted on cardboard. One hundred and fifty experiments and several clinical cases of osteomyelitis form the basis for this study.

Casts and Models of Club-Feet, With Motion Pictures

Frank A. Lowe, M. D.
540 Flood Building, San Francisco

Cutaneous Manifestations of Arsenic Poisoning

Samuel Ayres, Jr., M. D.
and

Nelson Paul Anderson, M. D.
2007 Wilshire Boulevard, Los Angeles

An exhibit consisting of clinical photographs, charts, and histologic sections of skin showing the presence of arsenic as revealed by microchemical stains. The Gutzeit method for the quantitative determination of arsenic will be demonstrated.

Urinary Calculi

A. Elmer Belt, M. D.
and

Donald A. Charnock, M. D.
723 Pacific Mutual Building, Los Angeles

A collection of calculi from all portions of the urinary tract with diagrams representing their location prior to removal and data covering their formation, densities, and obstructive uropathies.

V—ENTERTAINMENT PROGRAM

For descriptive text concerning Del Monte and Monterey, see page 288.

President's Dinner—Tuesday Evening, April 25, 7:30 p. m., in Main Dining Room.—The entertainment for the President's dinner will be simpler than in previous years, but it is hoped that it will meet the approval of those present.

Del Monte affords many amusements to occupy the spare moments of the convention. Golf, tennis, swimming, fishing, scenic drives and other entertainment may be arranged at any time.

Dr. Harry Alderson is golf chairman. Arrangements for the usual tournaments will be made by him.

Busses and cars will be furnished for the drives upon application. Notice of moving pictures and other entertainment will be given at the time of the convention.

Golf Announcement.—Through the courtesy of the president, Max Rothschild, California Medical Asso-

ciation members are invited to participate in a tournament planned for the Northern California Medical Golf Association at Del Monte Golf Course on Sunday, April 23; also a golf dinner to be held at the Hotel Del Monte, Saturday afternoon, April 22.

Those who are guests of hotel will not be charged extra for dinner. For nonguests a charge of \$2 will be made.

To enable the committee to make proper arrangements, we must know definitely three days in advance how many will attend the dinner and participate in the tournament. Be sure to inform us regarding your latest club handicap.

No tournaments are to be held during the actual state meeting, but during the free time, members can arrange to play through Peter Hay, the professional at Del Monte. See also bulletin board notices.

HARRY E. ALDERSON, *Chairman.*

VI—HOTEL AND RAILROAD INFORMATION

HOTEL RATES

HOTEL DEL MONTE, CONVENTION HEADQUARTERS

RATES FOR ANNUAL SESSION, APRIL 24-27, 1933

Only American Plan rates are quoted by the Hotel Del Monte. The rates published in the March issue of CALIFORNIA AND WESTERN MEDICINE have been revised and the following have since been quoted:

Main Building and Cottages:

Single room with bath (one person), \$9 per day.

Double room with bath (two persons), \$8 each person per day.
Sitting room, \$6.

Both Wings:

Single room without bath (one person), \$7 per day.
Double room without bath (two persons), \$6.50 each person per day.
Single room with bath (one person), \$8 per day.
Double room with bath (two persons), \$7 each person per day.

Two single rooms with bath between (two persons),
\$7.50 each person per day.
Two double rooms with bath between (four persons),
\$6.50 each person per day.

OTHER HOTELS IN VICINITY OF DEL MONTE*

MONTEREY

San Carlos Hotel (European plan—without meals):
Single room with shower bath.....\$2.50
Double room with shower bath.....\$4.50 (\$2.25 each)
Single room with tub bath.....\$3.00
Double room with tub bath.....\$5.00 (\$2.50 each)
Twin beds with tub bath.....\$5.50 to \$7 (\$2.25 to \$3.50 each)
Three single beds, one room.....\$7.50 (\$2.50 each)
Four single beds, one room.....\$9.00 (\$2.25 each)
Any room in house—American plan (with meals).....\$5 day

Monterey Hotel:
Single without bath.....\$1.50 and \$2.00
Double without bath.....\$2.00 and \$2.50 (\$1.00-\$1.25 each)
Single with bath.....\$2.00 and \$2.50
Double with bath.....\$3.00 and \$3.50 (\$1.50-\$1.75 each)

Kimball Hotel:
Single\$1.50 to \$3.00
Double\$2.00 to \$4.50

Mission Inn:
Single without bath.....\$1.50
Double without bath.....\$2.00 (\$1.00 each)
Single with bath.....\$2.50-\$3.00
Double with bath.....\$3.00-\$4.00 (\$1.50-\$2.00 each)
Double with twin beds.....\$4.00-\$5.00 (\$2.00-\$2.50 each)

Hotel Serra:
Single without bath.....\$1.50-\$2.00
Single with shower.....\$2.00

Double with shower.....\$3.00 (\$1.50 each)
Single with bath.....\$2.50
Double with bath.....\$3.50 (\$1.75 each)

Royal Hotel:
Single without bath.....\$1.25-\$1.50
Double without bath.....\$2.00 (\$1.00 each)
Single with bath.....\$2.00
Double with bath.....\$2.50 (\$1.25 each)

Highlands Inn:
American Plan:
Single room.....\$6.50
Double room.....\$11.00-\$12.00
European Plan:
Single room.....\$3.50
Double room.....\$5.00-\$6.00

PACIFIC GROVE

Forest Hill:
Single with bath.....\$2.50
Double with bath.....\$3.50 (\$1.75 each)
Twin beds with bath.....\$4.50 (\$2.25 each)

Del Mar Hotel:
Single without bath.....\$1.00-\$1.50
Double without bath.....\$1.50-\$2.50 (75c to \$1.25 each)
Single with bath.....\$1.50-\$2.50
Double with bath.....\$2.00-\$2.50 (\$1.00-\$1.25)

CARMEL

Pine Inn and the *La Playa Hotels* have rates with meals (American plan) from \$5.00 and \$5.50 to \$6.50 each (deducting price of meals missed).
The La Ribera (without meals), \$3.00 single and \$4.00 and \$5.00 double.

* Note. These hotels and rates are not official. This information was received from the Monterey Chamber of Commerce and is here printed for the convenience of members who may be interested.

RAILROAD INFORMATION *

April 24-27, 1933

FROM	21-DAY	3-MONTH	PULLMAN—EACH WAY		CHAIR CAR
	TICKET	TICKET	LOWER	UPPER	
San Francisco	\$ 5.95	\$ 7.15	.....	.....	75c
Los Angeles	18.35	22.00	\$4.50	\$3.60	\$1.00
Santa Barbara	13.30	15.95	.....	.....	1.00
San Diego to Del Monte Jct.....	24.35	None	.....	.....	.....
San Diego to Los Angeles .....	.....	.....	3.00	2.40	.....

RAILROAD SERVICE

DEL MONTE					SANTA FE	
DAYLIGHT	EXPRESS	SUNSET			DAYLIGHT	COASTER
Leave San Francisco.. 8:00 a. m.	3:05 p. m.	6:45 p. m.	Leave Santa Barbara.....	11:10 a. m.	1:20 a. m.	
Arrive Del Monte.....11:16 a. m.	6:15 p. m.	10:09 p. m.	Arrive Del Monte.....	6:33 p. m.	9:46 a. m.	
DAYLIGHT	COASTER					
Leave Los Angeles..... 8:00 a. m.	10:00 p. m.		Leave San Diego.....	2:10 a. m.	2:15 p. m.	
Arrive Del Monte..... 6:33 p. m.	9:46 a. m.		Arrive Los Angeles.....	7:15 a. m.	5:35 p. m.	

Service afforded by Daylight Limited, the Del Monte and Sunset Limited from San Francisco. Service from Southern California by Daylight Limited and Coaster.

* What is here given is printed for its general informative value. It is wise to check on your own ticket rates and time tables.

VII—WOMAN'S AUXILIARY

WOMAN'S AUXILIARY

to the

CALIFORNIA MEDICAL ASSOCIATION

1933 Annual Convention

Hotel Del Monte, Del Monte

April 24-27, 1933

Convention Chairman

Mrs. William H. Sargent

Assisted by Mrs. Thomas Clark

COMMITTEES

STUDIO TOUR

Mrs. Wilson Davidson

TRANSPORTATION

Mrs. Spencer Hoyt

REGISTRATION AND
INFORMATION

Mrs. Hiram Curry, Chairman
Mrs. Harold Trimble
Mrs. Frank Bowles
Mrs. D. Jefferies
Mrs. Louis Dyke
Mrs. Robert Leet
Mrs. Arthur Arehart
Mrs. Alvin Powell
Mrs. Claire Razor
Mrs. Robert Sutherland

DECORATIONS AND FLOWERS

Mrs. A. A. Alexander
Mrs. Robert Glenn

GARDEN TOUR

Mrs. Robert Glenn

PUBLICITY

Mrs. Arthur Arehart
Monterey
Mrs. Spencer Hoyt
Monterey

GOLF

Mrs. W. M. Gratiot

USHERS AND PAGES

Mrs. W. W. Crane
Mrs. Frank Baxter

RECEPTION

Mrs. C. A. Dukes,
Chairman
Mrs. E. N. Ewer
Mrs. Charles Rowe
Mrs. Albert Rowe
Mrs. George Reinle

PROGRAM OF MEETINGS AND ENTERTAINMENT

Sunday, April 23

Arrival of delegates, members and guests.

Greeted by delegation hostesses.

6:30 p. m.—Round table dinner for Auxiliary members.

8:45 p. m.—Cancer Commission meeting, Copper Cup Room.

Monday, April 24

8:45 a. m.—Meeting, State Board.

9:00 a. m. to 1:00 p. m.—Registration in Sun Room.

10:00 a. m.—Presidential Address—Discussion of Medical Economics by guest speakers, Hotel Del Monte, Auditorium. All Auxiliary members and doctors' wives are invited.

2:00 p. m.—Tour of studios in Carmel. Mrs. Wilson Davidson, Chairman.

6:30 p. m.—Round table dinner for Auxiliary members.

8:45 p. m.—Reception and musicale in honor of Mrs. James Percy, National Auxiliary President, and wives of guest speakers. Lobby.

The State Board will act on Reception Committee.

Tuesday, April 25

8:30 a. m. to 4:00 p. m.—Registration.

9:30 a. m.—Opening session of fourth annual convention, Mrs. F. E. Coulter presiding.

1:00 p. m.—Luncheon in honor of Mrs. F. E. Coulter, Del Monte Hotel Solarium if weather permits, dining room if inclement. Dr. Joseph King and Dr. George Reinle, guest speakers. Mrs. James Percy will preside. Mrs. Thomas Clark, Chairman.

2:30 p. m.—Garden tour of Del Monte gardens, personally conducted by Mr. Eddy, in charge of Del Monte nursery.

7:30 p. m.—President's dinner, Del Monte Hotel.

Wednesday, April 26

9:00 a. m. to 11:00 a. m.—Registration.

9:30 a. m.—Second session and election of officers.

1:00 p. m.—Luncheon in honor of president-elect, Pebble Beach Lodge. Sightseeing drive down the new Ocean Coast Highway, or guests may remain at Lodge for cards. Mrs. Arthur A. Arehart, Chairman, assisted by Mrs. Spencer Hoyt.

8:30 p. m.—Carmel Community Players present "Ladies of the Jury," a comedy by Fred Ballard, at the Carmel Community Playhouse.

All meetings will begin promptly on schedule.

Wives of all doctors are cordially invited to participate in the Auxiliary's activities and attend the convention session.

DEL MONTE AND THE MONTEREY DISTRICT

DEL MONTE

California's 20,000-acre playground, sport and social center, located between Los Angeles and San Francisco.

An observing traveler once said that Del Monte is all things—at once. His description, however brief, doesn't come far from the mark. For within Del Monte's vast estate of 20,000 acres is nearly every description of recreation and sport imaginable.

Golf.—Would you golf? Within a three-mile radius of Del Monte are five courses: more, in such a concentrated area, than is to be found elsewhere in the world. One of these courses, famous Pebble Beach, was the scene in 1929 of the National Amateur championship. At that time Bobby Jones called it the most picturesque and playable layout of his experience. Cypress Point, Del Monte, the Monterey Peninsula Country Club courses, and Pacific Grove's fine municipal course complete the list.

Tennis.—Is tennis your sport? Del Monte has eleven courts. Every June witnesses the Del Monte tennis championship when fine players from all parts of the coast gather to match their skill.

Trapshooting.—Do you go in for trapshooting? Del Monte has the largest and one of the best equipped set of traps in the country. Official gathering place

of the Pacific International Trapshooting Association, the Del Monte grounds present the sport at its best. State and sectional tournaments are held there annually as well as the yearly sports powwow of the California Indians in April.

Fishing and Hunting.—Perhaps your sport is fishing. Or hunting. There, too, Del Monte offers the best to be found. But one hour by motor from Del Monte, up the Carmel Valley, is San Clemente, Del Monte's guest ranch. Adjoining and extending into the great national forest that lies between the Salinas Valley and the coast, San Clemente offers the nimrod and hunter their heart's desire. Then, of course, there are the world-famous waters of Monterey and Carmel Bays for deep-sea fishermen.

Swimming.—Perhaps your favorite pastime is swimming, and the popular and healthful fad of sun-bathing. Del Monte provides complete facilities to satisfy your desires. The Roman Plunge in the beautiful and spacious hotel park has heated salt water and is open the year round with a smaller and safe plunge for children. The Beach Club at Pebble Beach has an open-air tank at the water's edge. Then there are the white sandy beaches on Monterey and Carmel Bays and the Pacific Ocean to enjoy surf bathing, and the ol' swimmin' hole at the Monterey Peninsula Country Club is another favorite spot.

Trails.—Have you tried the bridle paths at Del Monte? If not, you have missed a treat. There are more than one hundred miles of privately owned and signed scenic paths in the forest and along the beaches. A stable of fine mounts is maintained. By all means bring your riding togs.

Motoring.—Del Monte is a paradise for motorists. Del Monte Forest alone has more than one hundred miles of scenic boulevards within its toll gates, and there are wonderful interesting scenic trips down the Carmel Highlands and up the Carmel Valley, to the Mission of Carmel, San Juan Bautista—the best bit of old California in existence—the redwoods of Santa Cruz and, of course, the magnificent coast highway to the Big Sur River.

Railroads.—Easily reached, Del Monte is 125 miles south of San Francisco and 375 miles north of Los Angeles. It is served by excellent highways and directly by the Southern Pacific Lines. An easy three-hour trip from San Francisco and but overnight from Los Angeles, it has, since 1880, set a standard of excellence in the resort world which it jealously guards.



The Copper Cup Room at Hotel Del Monte, where meetings of the California Medical Association will be held during the convention from April 24 to 27.

State Highway, United States No. 101, offers a comfortable and scenic automobile ingress from all parts of California.

Del Monte is on the Coast Line of the Southern Pacific Company between Los Angeles and San Francisco. By motor, it is a comfortable and scenic ride from all sections of the state. Leaving the Coast Highway, 101, at Salinas, there are eighteen miles of wide, surfaced, modern highway that make the trip a matter of only twenty minutes or so.

"Don't Miss Del Monte and the Monterey Peninsula," is a slogan travelers have been using for more than fifty years!



MONTEREY

Monterey Peninsula is richly endowed with travel interest. Here are attractions for everyone. Historic-minded motorists who travel with guide book and camera, and others who merely poke around for the fun that's in it, both find their heart's desire within California's famous "Circle of Enchantment."

Good roads, clearly marked, lead the willing motorist to points of special charm and reveal vistas and scenes which artists have chosen to proclaim the most beautiful anywhere. A trip to the Monterey Peninsula and along the coast to the Big Sur may indeed be called a trip so memorable as never to be forgotten.

The city of Monterey is in itself nearly enough reward for having made the trip. Monterey was discovered by the Spaniard Cabrillo in 1542. He called it "Bay of the Pines," and as such was it known until 1602, a decade before the Pilgrims landed on eastern shores, when Vizcaino rediscovered it and called it Monterey (King of the Forests) after the Comte de Monterey, then Viceroy of Mexico. Over a century and a half elapsed before white men again set foot on the soil of California. Then came Portola in 1770, who established the Monterey Presidio, and Padre Junipero Serra, who founded the San Carlos Mission.

Monterey was a gay place under Spanish rule. All the glamor of old Spain held forth then, and life there was a perpetual care-free fiesta. In 1821 Mexico threw off the Spanish yoke and a period of unrest followed, culminating in 1846, when Commodore Sloat raised the Stars and Stripes over the historic Customs House and Monterey became an American possession.

Monterey abounds with historic and beautiful points of interest. Visitors there would do well not to miss the following landmarks: *San Carlos Church*, founded in 1770 by Junipero Serra and once the place of wor-



The grandeur of Pebble Beach, California. This photo, taken from the world-famous Seventeen Mile Drive, suggests the rugged splendor of the sea and Monterey coast. Here the blue of the Pacific mingles with the sky and age-old cypress to produce vistas of unforgettable power. Pebble Beach is an exclusive residential section of the Monterey Peninsula.

ship for representatives of the Spanish throne, governors and Presidio officers; *Monterey Presidio*, established by Portola in 1770 and prominent throughout Monterey's history; *First Theater in California*, used by picturesque strolling players as early as 1847. Of great interest, this building is now open as a public museum. *Customs House*, over which have flown the flags of Spain, Mexico and the United States; *Colton Hall*, first capitol building of California. Here was drafted the constitution of California. *Stevenson House*: The beloved Robert Louis Stevenson lived and wrote much of his memorable works in Monterey. Praise of the Monterey coast is to be found in many of his books.

Seventeen Mile Drive.—No trip to the Monterey Peninsula is complete, of course, without including the world-famous Seventeen Mile Drive. The combinations of pines, age-old cypress and the sparkling blue of the Pacific is one that hundreds of artists have honored with their canvases.

VIII—SECTION MEETINGS

Rules Regarding Papers and Discussions at the Annual State Session:

Upon recommendation of the Executive Committee, the following rules regarding papers have been adopted by the Council:

1. All papers read before a section of an annual session are the property of CALIFORNIA AND WESTERN MEDICINE.

2. The maximum time that may be consumed by any paper is fifteen minutes, provided that not to exceed ten minutes' latitude may be allowed invited guests at the discretion of the presiding chairman.

3. The maximum time permitted any individual to discuss a paper is four minutes. This also applies to the author in closing his discussion. No speaker may discuss more than once any one subject. The presiding officer of each section is expected to enforce these rules.

4. A copy of each and every paper presented at the state meeting must be in the hands of the chairman or secretary of the section or in the hands of the general secretary before the paper is presented.

Each paper must be typewritten in double space. Single space and carbon copies are not acceptable.

5. All papers read at an annual session of the California Medical Association automatically become the property of the Association (By-Laws, Chapter VI, Section 4). The Committee on Publications of the official publication, CALIFORNIA AND WESTERN MEDICINE, decides whether or not the paper submitted is of such nature as to be published in full in CALIFORNIA AND WESTERN MEDICINE or in abstract form. (In case the latter procedure is followed, the expense of setting up the type for reprints may be borne by the Association.) It is also the ruling that when any section has a larger number of papers on its program than can be covered in a two-day session, that not more than the average number of papers from such section shall be printed, unless for special reasons. Manuscripts not accepted for CALIFORNIA AND WESTERN MEDICINE will be returned to the authors, for submission to other medical journals, is so desired.

6. Articles are accepted for place on the program on condition that they are also contributed solely to CALIFORNIA AND WESTERN MEDICINE. Authors desiring to publish their papers elsewhere than in the journal must make written request to the editor. Papers submitted at meetings of this Association must not have been previously submitted or printed elsewhere.

7. No paper will be accepted by the General Program Committee nor by Section Program Committees unless accompanied by a synopsis of not to exceed fifty words.

8. Papers shall not be "read by title." Papers should be original typewritten copies, double spaced, and should be handed to the section secretary after having been read.

9. No member may present more than one paper at any annual session, provided that a member may be a collaborator on more than one paper, if these papers are presented by different authors.

10. Failure on the part of an author to present a paper precludes acceptance of future papers from such author for a period of two years, unless the author explains to the satisfaction of the Executive Committee his inability to fulfill his obligation.

Numbering of Section Papers

For convenience in reference, papers are numbered in serial sequence for the entire session, instead of a separate sequence for each section.

Business Meetings of Sections

Time of business meetings and elections of officers of sections will be scheduled on section blackboards by section secretaries, and through preliminary announcements by section chairmen.

Unless otherwise announced, the business meeting of each section and the election of officers will be held immediately after the reading of the second paper on the second day's section program.

Section Index to This Program*

(Sections are arranged alphabetically. Numbers in parenthesis after each section indicate sequence reference numbers of papers read in each section.)

I.—Anesthesiology (1 to 10).....	290
II.—Dermatology (11 to 20).....	291
III.—Eye, Ear, Nose and Throat (21 to 30).....	292
IV.—General Medicine (31 to 48).....	293
V.—General Surgery (49 to 68).....	294
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VII.—Neuropsychiatry (77 to 84).....	297
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* Cancer Commission. The program of the Cancer Commission is printed in this issue in its department column.

I

ANESTHESIOLOGY SECTION

CAROLINE B. PALMER, M. D., *Chairman*
2557 Clay Street, San Francisco

JOHN MILLER WILSON, M. D., *Secretary*
605 Professional Building
65 North Madison Avenue, Pasadena

First Meeting—Sun Porch

Monday, April 24, 2 to 5 p. m.

1. *Chairman's Address—The Future of Anesthesiology as a Medical Specialty*—Caroline B. Palmer, M. D., San Francisco.

Reasonable standards for the specialty. Present trend and causes. Logical consequences of pursuing present course. Methods for overcoming unfavorable conditions. Lay anesthesia and lay anesthetists. Adequate supply of properly trained medical anesthetists. Coöperation.

2. *The Principles of Basal Anesthesia With Avertin*—Edward H. Bolze, M. D., San Francisco.

Introduction. Survey of pharmacological background. Clinical observations, with special reference to indications and contraindications. Management of case: selection; dosage; combined anesthesia; pre- and postoperative supervision. Presentation of three hundred cases of basal anesthesia with avertin. Conclusions.

Discussion by Dorothy Wood, M. D., San Francisco.

3. *The Proposed International College of Anesthetists*—Mary E. Botsford, M. D., San Francisco.

The growth of the Associated Anesthetists of the United States and Canada suggests the mutual advantage of a wider fellowship with anesthetists of other countries. Efforts to be made to secure foundations for the training of medical anesthetists. Qualifications for specialists.

Discussion by William W. Hutchinson, M. D., Los Angeles.

4. *Psychic Factors in Anesthesia*—*H. G. Mehrtens, M. D., San Francisco. To be read by Pearl Pouppirt, M. D., San Francisco.

Anesthesiology has much in common with psychiatry, particularly in its emphasis on the destructive influences of fear and psychic shock; its insistence on preoperative information concerning the personality makeup, previous anesthetic experiences and postoperative mental difficulties. Both specialties are interested in developing a technique to overcome fear and nervousness previous to anesthesia.

Consideration of the psychic effects of different kinds of anesthetics and of the preanesthetic sedatives.

The disadvantages of considering anesthesiology as separate from the other medical specialties. The necessity for the broadest medical viewpoint, including the psychiatric, in the modern practice of anesthesia.

Discussion by Milton Lennon, M. D., San Francisco.

5. *Anesthesia in Gynecology*—Wesley J. Woolston, M. D., Pasadena.

Operative gynecology principally abdominal surgery—importance of choosing carefully the anesthesiologist but more important the choice of the anesthetist. Advantages of coöperation between experienced graduate physician anesthetist and

* Deceased.

surgeon. Safety of patient rather than cost or convenience of administration. Laparotomies ten times as dangerous as plastic gynecologic surgery. Summary of 3067 histories of patients operated upon for pelvic infection. Heart and lung complications in gynecologic surgery. Nitrous oxid, oxygen or ethylene compared with regional or local anesthesia in gynecology.

Discussion by Henry A. Stephenson, M. D., San Francisco.



Second Meeting—Club Room

Tuesday, April 25, 8:30 to 11:30 a. m.

6. *The Ill Status of the Nurse Anesthetist*—W. Chalmers Francis, M. D., Los Angeles. (By invitation.)

Educational requirements and standing when graduated: (a) Medical students; (b) Nurses. Legal requirements to obtain license, legal limitations to authority, legal duties in active work for (a) doctor; (b) nurse. Civil and legal liability of (a) doctor and (b) nurse. Dangers to nurse. Dangers and legal risk to doctor of administration of anesthesia by nurse. Court decisions.

7. *Spinal Anesthesia Technique, Records and Results*.—Louis H. Maxson, M. D., Seattle, Washington. (By invitation.)

Spinal anesthesia a vital part of the anesthetist's professional equipment. Harborview Hospital technique, with gravity control of level of anesthesia—simple and safe. Special record sheets, providing substantial basis for inferences drawn. Discussion of Trendelenburg position. Failures. Conclusions.

RECESS

Election of Officers and Business Meeting

(Note.—If some other time is decided upon, a standing notice to that effect will be placed on the Section's bulletin board.)

8. *Clinical Experience with CO₂ Inhalations*—Randolph C. Flood, M. D., San Francisco.

Presentation of clinical experience with CO₂ in following conditions: congenital atelectasis; asphyxia; respiratory complications following tonsillectomies; bronchopneumonias with pulmonary edema. Method of administration. Charts showing relation of pulmonary ventilation blood CO₂ and respiratory rate demonstrating transition from respiratory decompensation to compensated respiratory ventilation.

Discussion by A. J. Wineland, M. D., Beverly Hills.

9. *Peanesthetic Drugs—A Review of Pharmacological Literature, With Clinical Implications*—Clinton H. Thienes, M. D., Los Angeles. (By invitation.)

A discussion of relative toxicities and pre-anesthetic efficiencies, as determined in the experimental laboratory. In addition, effects on the autonomic nervous system, liver and kidneys, and metabolism are described, and the absorption, fate and excretion correlated with clinical experience.

Discussion by Chauncey D. Leake, Ph. D., San Francisco.

10. *The Pros and Cons of Subarachnoid Block*—James C. Doyle, M. D., Los Angeles.

Analysis of 1124 cases anesthetized by means of subarachnoid block at the Hospital of the Good Samaritan in Los Angeles, during the period from 1930 to 1932 inclusive. Contraindications to its use. Advantages in cases where method is applicable discussed in detail.

II

DERMATOLOGY AND SYPHILOLOGY SECTION

LAURENCE TAUSSIG, M. D., *Chairman*
803 Fitzhugh Building
384 Post Street, San Francisco

LOUIS F. X. WILHELM, M. D., *Vice-Chairman*
1410 California Medical Building
1401 South Hope Street, Los Angeles

CHARLES J. LUNSFORD, M. D., *Secretary*
3115 Webster Street, Oakland

First Meeting, Private Dining Room
Monday, April 24, 2 to 5 p. m.

11. *Chairman's Address*—Laurence Taussig, M. D., San Francisco.

12. *Herpes Zoster—A Review of Efficacy of Various Forms of Therapy as Observed on Fifty Patients*—Harvey T. Olsan, M. D., Los Angeles. (By invitation.)

A one year's résumé of results obtained in the treatment of herpes zoster is presented. An effort is made to compare the respective values of each of three common methods of therapy employed, and to contrast results with the spontaneous evolution of the disease in the untreated patient.

Discussion by Hiram Miller, M. D., San Francisco.

13. *This paper has been withdrawn.*

14. *Cutaneous Manifestation of Arsenic Poisoning*—Samuel Ayres, Jr., M. D., and Nelson Paul Anderson, M. D., Los Angeles.

The widespread use of arsenic in industry, agriculture and for domestic uses is not generally recognized. Poisoning may result from exposure to relatively minute quantities in susceptible individuals. Erythematous, eczematous, exfoliative eruptions as well as keratoses, basal cell epitheliomas, Bowen's precancerous dermatosis, scleroderma, etc., may result from arsenic poisoning.

Discussion by J. C. Geiger, M. D., San Francisco.

15. *Anaphylactic Dermatitis Following Rattlesnake Bite*.—C. Ray Lounsberry, M. D., San Diego.

Review of literature on snake bite. Chemical analysis of venom. Systemic and dermatological symptoms which developed following bite. Emphasis placed on dermatological findings which are minimized in the literature. Discussion of treatment. Lantern slide demonstrations showing common rattlesnakes found in San Diego County. Museum specimens.

Discussion by Louis F. X. Wilhelm, M. D., Los Angeles.



Second Meeting—Children's Play Room No. 1
Thursday, April 25, 8:30 to 11:30 a. m.

16. *A Study of a New Tissue Staining Method for the Identification of Spirocheta Pallida*—Stanley O. Chambers, M. D., Los Angeles.

A new tissue method devised by Krajian for staining *Spirocheta pallida* has been applied to the identification of the organism in tissue from primary lesions of syphilis. The objective was to offer a more rapid, simplified and accurate method and to compare it with the present dark field. Eighty lesions were examined.

Discussion by Hiram Miller, M. D., San Francisco.

17. *Clinical and Serological Results in the Treatment of Syphilis*—Kendal P. Frost, M. D., and H. Sutherland Campbell, M. D., Los Angeles.

A résumé of the results obtained in treatment of a group of selected cases over a period of

three to five years with an attempted evaluation of modern therapy.

Discussion by Hiram Miller, M. D., San Francisco.

RECESS

Election of Officers and Business Meeting

(Note.—If some other time is decided upon, a standing notice to that effect will be placed on the Section's bulletin board.)

18. *Spinal Fluid Findings in Syphilis—A Statistical Study*—Norman N. Epstein, M. D., John M. Graves, and Samuel Sherman, M. D., San Francisco.

The spinal fluid findings in about five hundred patients treated in the syphilis clinic of the University of California are reported. The importance of spinal fluid examinations in the syphilitic patient is emphasized. Indications for spinal puncture are pointed out. (Lantern slides.)

Discussion by Stanley O. Chambers, M. D., Los Angeles.

19. *Agranulocytosis with Associated Skin Lesions, Following Salvarsan Therapy—Report of a Case*—Ernest K. Stratton, M. D., San Francisco.

The blood picture was a leukopenia with no granular cells, coming on three days after the fourth injection of neosalvarsan. The skin lesions consisted of necrotic ulcers on the scrotum, penis, perineum, and buttocks.

A brief discussion of the etiology and treatment with review of the literature.

Discussion by Louis F. X. Wilhelm, M. D., Los Angeles.

20. *Report of Bismuth Injections in the Treatment of Seventy-five Cases of Warts at the Cowell Memorial Hospital at the University of California*—C. J. Lunsford, M. D.; G. W. Binkley, M. D., and D. S. Fox, M. D., Oakland.

Review of the recent article appearing in the July, 1932, issue of *Archives of Dermatology and Syphilology* by Dr. Sophie A. Lurie. Cases classified in accordance with the site of lesions and type of verruca; charts of results of therapy after varying numbers of injections; conclusions drawn from body of the article evaluating this method of treatment.

Discussion by Sophie Lurie, M. D., Los Angeles.



III

EYE, EAR, NOSE AND THROAT SECTION

ISAAC H. JONES, M. D., *Chairman*

Wilshire Medical Building

1930 Wilshire Boulevard, Los Angeles

SAMUEL A. DURR, M. D., *Vice-Chairman*

1304 Medico-Dental Building

233 A Street, San Diego

J. ROY JONES, M. D., *Secretary*

2138 Third Avenue, Sacramento

First Meeting—Tower Room

Wednesday, April 26, 8:30 to 11:30 a. m.

21. *Neurotologic Studies in Epilepsy*—E. E. Langdon, M. D., Santa Monica.

Examination of the ear mechanism of thirty-five cases of idiopathic epilepsy by the turning chair tests and caloric tests. All cases having a complete neurologic and general physical examination previous to the tests, and all those showing a positive Wassermann, or having a Jacksonian type of epilepsy or giving a history of head injury were excluded from this series.

Discussion by Samuel D. Ingham, M. D., Los Angeles, and Howard C. Naffziger, M. D., San Francisco.

22. *Inadequate Nasal Respiration and Corrective Measures*—George W. Walker, M. D., Fresno.

Author thinks straightening of deflected septum too often insufficiently done and perforation

too frequently a result. Suggests that placing initial cut in front of mucocutaneous junction, greater care and deliberation in dissection, will give better results. Turbinate care advised. Operation in Ozena and new method of dealing with adhesions mentioned.

Discussion by Frank E. Detling, M. D., Los Angeles.

23. *The Present Status of Sinus Therapy*—Andrew B. Wessels, M. D., San Diego.

Description and attempt to evaluate the present-day methods in the treatment of sinus pathology. The importance of thorough diagnosis, with special reference to accurate roentgen-ray interpretation, will be considered. Where surgery is required for more than simple drainage, operative interference should be "complete." Description of modern surgical procedures.

24. *Sinus Disease in Children*—Rea E. Ashley, M. D., San Francisco.

In this paper we discuss our conception of sinus disease in children. The discussion will include mention of the present day wave of enthusiasm among the laity, regarding this disease. The etiology, signs and symptoms, the diagnosis and treatment, with special reference to local treatment, will also be included.

Discussion by Chester H. Bowers, M. D., Los Angeles.

25. *The Present Status of Facial Nerve Surgery*—Robert C. Martin, M. D., San Francisco.

The recent interest in facial nerve surgery has been widespread. Direct suture and nerve grafts have been successfully used. Ballance and Deul are so enthusiastic that incomplete results are published and the dangers of the operation are so ignored that much damage will probably result from too much operating. When to operate. Suture vs. grafting. Dangers of operation: meningitis, serous labyrinthitis. Probable per cent of success will not be as high as the suture advocates state.

Discussion by O. W. Jones, M. D., San Francisco.



Second Meeting—Tower Room

Thursday, April 27, 8:30 to 11:30 a. m.

26. *Retinal Glioma Treated by Radium Therapy*—Hans Barkan, M. D., San Francisco.

Case of a two-year-old child whose right eye was enucleated with the diagnosis of intra-ocular glioma and glaucoma. The left eye had a glioma in the upper temporal quadrant. Radiation behind the eye with a specially constructed container, has, for a period of eight months, resulted in some regression of the growth.

Discussion by R. R. Newell, M. D., San Francisco.

27. *Optometry in the University of California*—Milton H. Shutes, M. D., Oakland.

This paper is concerned with optometry only as it exists at the University of California at Berkeley. If, for any good reason, there is a place in the future practice of medicine for optometry, then the optometry curriculum in the department of physics would seem to offer a proper contact for ophthalmology.

Discussion by Joseph L. McCool, M. D., San Francisco.

RECESS

Election of Officers and Business Meeting

(Note.—If some other time is decided upon, a standing notice to that effect will be placed on the Section's bulletin board.)

28. *Intranasal Tear Sac Operation*—Edwin S. Budge, M. D., Los Angeles.

Any treatment or operation devised for the relief or cure of dacryocystitis to be commendable must be one which will not only relieve and prevent the recurrence of the infection, but it

must do away with that ever present and annoying disturbance, epiphora. The Pollyak intranasal operation, one similar to the so-called "West," meets this requirement.

Discussion by A. R. Irvine, M. D., Los Angeles.

29. *Unilateral Conjunctivitis from Peat Dust*—Barton J. Powell, Jr., M. D., Stockton.

Unilateral conjunctivitis which is indigenous to the San Joaquin River Delta. A résumé of the geographic and geological conditions of this territory is described in furthering the etiology. Series of over one hundred cases presented. Exciting cause is evidently direct irritation by peat dust. Several theories enumerated why this conjunctivitis is always unilateral. No positive proof given.

Discussion by Dewey R. Powell, M. D., Stockton.

30. *Technique of Differential Diagnosis in Quantitative Perimetry*—Clifford B. Walker, M. D., Los Angeles.

Brief demonstration of technique of quantitative perimetry such as can be actually accomplished in practical office and hospital routine in a reasonable length of time. This demonstration will be followed by lantern slide exhibits of as many different field conditions as can be shown in the time allowed.

Discussion by George N. Hosford, M. D., San Francisco.



IV

GENERAL MEDICINE SECTION

R. MANNING CLARKE, M. D., *Chairman*
1219 Hollingsworth Building
606 South Hill Street, Los Angeles

FRED H. KRUSE, M. D., *Secretary*
916 Fitzhugh Building, 384 Post Street
San Francisco

First Meeting—Auditorium

Monday, April 24, 2 to 5 p. m.

31. *Chairman's Address*—R. Manning Clarke, M. D., Los Angeles.

32. *Toxic Encephalitis and Myelitis Secondary to Intravenous Arsphenamin—Case Reports and Treatment*—Carlyle P. Imerman, M. D., Hollywood.

A decrease in the high mortality (approximately 98 per cent) may be accomplished by medical and surgical measures directed toward the reduction of acute intracranial and intraspinal pressure, in conjunction with the present accepted therapy. Patient with a toxic encephalitis completely recovered. Early diagnosis and treatment paramount.

Discussion by Mark A. Glaser, M. D., Los Angeles, and H. W. Newman, M. D., San Francisco.

33. *The Treatment of Central Nervous System Syphilis with Hyperpyrexia Produced by Diathermy*—Wilfred F. Beerman, M. D., Mervyn H. Hirschfeld, M. D., Norman N. Epstein, M. D., S. Barre Paul, M. D., and Leroy Gay, M. D., San Francisco.

The use of hyperpyrexia produced by diathermy as an adjunct in the treatment of syphilis has been employed at Mount Zion Hospital, San Francisco, for the past two and a half years. The results obtained in a group of patients with various types of central nervous system syphilis are reported. The technique of the method is described. Lantern-slide demonstration.

Discussion by Milton Lennon, M. D., San Francisco.

34. *Chronic Carbon Monoxid Poisoning—A Present-Day Hazard*—Paul Michael, M. D., Oakland.

From the department of experimental pathology, University of California. Brief review

and discussion of literature. Laboratory and clinical studies of the following hazards: smoking-rooms, ferryboats, garages, transportation bus lines, street traffic, vehicular tunnels, and aviation. Animal experimental work on immunity to infection in relation to lowering immunity following gas poisoning.

Discussion by Gertrude Moore, M. D., and Norman Leet, M. D., Oakland.

35. *Clinical Amebiasis in California*—Alfred C. Reed, M. D., San Francisco.

A summary of 283 cases of amebiasis with special reference to incidence in California, clinical picture and treatment. A group of cases resistant to treatment is discussed.

Discussion by F. F. Gundrum, M. D., Sacramento, and John V. Barrow, M. D., Los Angeles.



Second Meeting—Auditorium

Tuesday, April 25, 8:30 to 11:30 a. m.

36. *The Use of Glycin in the Treatment of Myasthenia Gravis*—Earl O. G. Schmitt, M. D., San Jose.

Case reports of two patients with myasthenia gravis recently treated by oral administration of the amino-acid glycin (glycocoll) with good results. The report embodies a résumé of the employment of the feeding of amino-acids in various muscular dystrophies. (Lantern slides.)

Discussion by Walter F. Schaller, M. D., San Francisco, and Albert H. Rowe, M. D., Oakland.

37. *Newer Aspects of Mineral Metabolism and Deficiency Diseases*—Carl L. A. Schmidt, M. D., Berkeley. (By invitation.)

Brief discussion of the newer knowledge appertaining to the chemistry of the vitamins, such as the relation of vitamin A to carotinoid pigment and the method employed by the body for conversion of the latter into the former, as well as the relation of vitamin C to hexuronic acid and the relation of that substance to oxidations and reductions in the body. Proper use and administration of the vitamins. Newer aspects of mineral metabolism, especially that relating to calcium and phosphorus, and the relation of vitamin D and parathyroid hormone thereto. Question of hypo- and hyperfunction of the various endocrine glands and the bearing of this subject to pathological conditions. Relation of the vitamins to dentition and the relation of the physician to this subject.

RECESS

Election of Officers and Business Meeting

(Note.—If some other time is decided upon, a standing notice to that effect will be placed on the Section's bulletin board.)

38. *Certain Clinical Aspects of Bone-Salt Metabolism*—Francis Scott Smyth, M. D., San Francisco.

Bone is a labile organ of the body subject to various factors of destruction and repair. The laboratory has given us considerable information, but clinical enthusiasm has frequently advanced beyond the point of laboratory proof. Importance of stressing consideration of factors of absorption and excretion and danger of unbalanced therapy.

39. *The Clinical Control of Calcium Metabolism*—Fletcher B. Taylor, M. D., Oakland.

Two case studies will be given on lantern slides: (1) Adult tetany relieved by medical measures. (2) Negative calcium balance changed to positive calcium balance in an adult with rarefied bones. A diagram showing various factors which influence calcium metabolism will be shown. Sources of calcium and therapeutic aids will be discussed. Also therapeutic dangers, safeguards, and costs will be considered.

Discussion of symposium by Leon Goldman, M. D., San Francisco (by invitation); James W. Sherrill, M. D., La Jolla; Leonard Barnard,

M. D., Oakland; and David M. Greenburg, M.D., San Francisco (by invitation).



Third Meeting—Auditorium

Joint meeting of Pathology and Bacteriology and General Medicine Sections

Wednesday, April 26, 8:30 to 11:30 a. m.

40. *The Neutropenic State*—

(a) *Hematological Aspects*—Madeleine Fallon, M. D., University of Minnesota. (By invitation.)

(b) *Medical Aspects*—B. O. Raulston, M. D., Los Angeles.

41. *The Anemias—The Use of Iron in Treatment*—Cyrus C. Sturgis, M. D., University of Michigan, Ann Arbor. (By invitation.)

It is essential before the application of any therapeutic measures in the treatment of the anemias to determine accurately the exact type of blood dyscrasia from which a patient is suffering. A practical classification of the anemias will be considered briefly and those benefited by iron medication will be emphasized. The use of iron will be discussed from the standpoint of preparations, mode of administration, absorption, action, and the general metabolism of the substance in the body.

42. *Chronic Idiopathic Hypochromic Anemia—Clinical Aspects with Special Reference to the Relationship of Diet and Nutrition to Anemia*—Stacy R. Mettler, M. D., San Francisco; Frederick Kellogg, M. D., San Francisco, and James F. Rinehart, M. D., San Francisco.

This paper consists of a presentation of the clinical manifestations of a condition characterized by achlorhydria and an anemia of low color index. This condition is known in the medical literature variously as "hypochromic anemia," "microcytic anemia," and "chronic chlorosis." A preliminary report on an investigation concerning the effect of a diet rich in iron and also of large doses of iron on blood formation is given. In addition, some experimental work concerning the probable rôle of the abnormality of the gastro-intestinal tract in the defect in blood formation will be discussed.

43. *The Anemia of Gastric Cancer—Its Response to Therapy*—Garnett Cheney, M. D., San Francisco.

Theoretical considerations of the cause of the anemia. Exact mechanism unknown; characteristics of the anemia. Response of red blood cells, hemoglobin, and reticulocytes to combined liver extract and iron therapy. Changes in red cell size. Comments on clinical improvement. Charts.

Discussion on symposium by Madison J. Keeney, M. D., Los Angeles; Ernest Falconer, M. D., San Francisco; Madeleine Fallon, M. D., Minnesota; William H. Barrow, M. D., San Diego; George A. Gray, M. D., San Jose; William Bender, M. D., San Francisco; and Walter W. Boardman, M. D., San Francisco.



Fourth Meeting—Auditorium

Thursday, April 27, 8:30 to 11:30 a. m.

44. *Hypoglycemia and Hyperinsulinism*—Milo K. Tedstrom, M. D., Anaheim.

Hypoglycemia defined. Classification of hypoglycemia on basis of etiology. Brief discussion of blood sugar regulatory mechanism. Summary of symptoms and pathology of reported cases. Report of two cases of hypoglycemia under personal observation. Summary of treatment with special reference to hypoglycemia induced by hyperinsulinism.

Discussion by Roland Cummings, M. D., Los Angeles, and J. M. Nielsen, M. D., Los Angeles.

45. *Insulin Fattening in the Ambulatory Patient*—H. Clare Shepardson, M. D., San Francisco.

A brief résumé of the literature pertaining to the use of insulin in malnutrition. The effects produced by insulin on the patient and his metabolism, and the limitations of such therapy are discussed. Finally a consideration of the results obtained in the use of insulin to increase weight in twenty individuals of the constitutionally slender type.

Discussion by Bernard Smith, M. D., Los Angeles, and F. M. Pottenger, M. D., Monrovia.

46. *Pulmonary Arteriosclerosis*—William J. Kerr, M. D., San Francisco, and Francis J. Rochex, M. D., San Francisco.

Pulmonary arteriosclerosis has been described in association with syphilis and with a variety of conditions where there is an increase in pressure in the pulmonary circulation. Clinical symptoms, such as cyanosis and dyspnea, may be marked, and an increase in the red count and hemoglobin to the proportion of polycythemia may occur. Increased pulmonic second sound, pulsation of the interspaces, and movement of the diaphragm with beat of the heart are described. Clinical and roentgenographic findings will be co-related with the pathological findings.

Discussion by John C. Ruddock, M. D., Los Angeles, and Robert S. Stone, M. D., San Francisco.

47. *A Comparative Study of the Effects of Insulin-Free Pancreatic Extract and the Circulatory Hormone (Kallikrein of Frey and Kraut) on Angina Pectoris*—Franklin R. Nuzum, M. D., Santa Barbara, and A. H. Elliott, M. D., Santa Barbara.

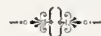
Physiologic and pharmacologic properties of these substances. Similarities and differences, with particular reference to their effects upon the coronary flow of the perfused heart. A clinical evaluation of their application in the treatment of angina pectoris. The circulatory hormone appears to be ineffective, while the extract of pancreas is of definite value.

Discussion by Hilmar O. Koefod, M. D., Santa Barbara, and Hans Lisser, M. D., San Francisco.

48. *Pregnancy as a Complication of Heart Disease*—Ina M. Richter, M. D., Santa Barbara, and John F. Rickard, M. D., San Francisco.

Pregnancy to be considered as a complication of an already existing cardiac condition and a study made of its influence on the cardiac condition. Relation of cardiac condition to fetus. Change in character and position of murmur from examination to examination with advance of pregnancy.

Discussion by Irving H. Betts, M. D., Visalia, and Alice Maxwell, M. D., San Francisco.



V

GENERAL SURGERY SECTION

HAROLD BRUNN, M. D., *Chairman*

1001 Fitzhugh Building

384 Post Street, San Francisco

E. ERIC LARSON, M. D., *Secretary*

310 Wilshire Medical Building

1930 Wilshire Boulevard, Los Angeles

EDWIN M. TAYLOR, M. D., *Assistant Secretary*

230 Grand Avenue, Oakland

First Meeting—Bali Room

Monday, April 24, 2 to 5 p. m.

49. *Chairman's Address*—Harold Brunn, M. D., San Francisco.

50. *The Viscerospinal Syndrome—A Confusing Factor in Surgical Diagnosis*—Irving Wills, M. D., and Rodney F. Atsatt, M. D., Santa Barbara.

Lumbar myositis (from strain or infection) with radiculitis may give signs and symptoms

simulating surgical abdomen. Pain (sometimes colicky in nature), nausea, vomiting, abdominal rigidity, and temperature may be confused with ureteral stone, appendicitis, intestinal obstruction, or perinephritic abscesses, in diagnosis. Case reports.

Discussion by John B. Doyle, M. D., Los Angeles, and Emmet Rixford, M. D., San Francisco.

51. *The Control of Pain in Pregangrenous Arteriosclerotic and Thromboangitic Ischemia*—Frederick Leet Reichert, M. D., San Francisco.

Although the ischemia in the extremities of patients suffering from arteriosclerosis or thromboangitis is a local manifestation of a generalized pathologic process, yet it can be definitely improved and the pain associated with it relieved by interruption of the sympathetic pathways to the affected limb by alcoholic injections.

Discussion by Steele F. Stewart, M. D., Los Angeles, and Edward B. Towne, M. D., San Francisco.

52. *Bile Peritonitis*—Stanley H. Mentzer, M. D., San Francisco.

The toxicity of bile peritonitis arises from undetermined sources. Clinically and experimentally small doses of bile frequently produce a fatal peritonitis, yet on occasion the abdomen may contain many liters of bile, without serious consequences. The mechanism of this phenomenon is discussed, and the author presents several illustrative cases.

Discussion by Harlan Shoemaker, M. D., Los Angeles, and Alanson Weeks, M. D., San Francisco.

53. *The Z-Plastic Operation in Reconstructive Surgery of the Extremities*—Hugh Toland Jones, M. D., Los Angeles.

This is a procedure that serves in a number of ways in the relief of scar contractures. In carefully selected cases it has been found useful in the relief of certain contractures of the axilla, of the fingers and thumb, and of contracture binding the dorsum of the foot to the shin.

Discussion by Harold E. Crowe, M. D., Los Angeles, and Sylvan L. Haas, M. D., San Francisco.

54. *Reconstruction of the Burned Face*—Howard L. Updegraff, M. D., Hollywood.

Reconstruction of the burned face may be aided materially by surgery, x-ray therapy, glandular medication, and in some cases bacteriophage. A single-flap tube may be waltzed as many times as desired over a burned face, leaving as much tissue as necessary at any given area. The treatment of keloids has materially advanced in the discovery that the majority of keloidal cases have a lowered basal metabolism. (Motion picture illustration.)

Discussion by Clarence C. Reed, M.D., Hynes, and Sterling Bunnell, M. D., San Francisco.



Second Meeting—Bali Room

Joint Meeting of Radiology and General Surgery Sections

Tuesday, April 25, 8:30 to 11:30 a. m.

SYMPOSIUM ON LESIONS OF THE COLON

55. *The Roentgenological Diagnosis of Nonmalignant Lesions of the Colon*—Ray G. Taylor, M. D., Los Angeles.

The following conditions will be briefly considered with reference to roentgenological evidence and differential diagnosis and will be illustrated by appropriate lantern slides: anomalies, spasm, adhesions, adventitious bands, tuberculosis, colitis, diverticulosis, intussusception, and polyposis.

56. *Malignant Tumors of the Colon*—Carl B. Bowen, M. D., Oakland.

The technical procedures involved will be outlined; also various malignant tumors will be

discussed as to their location and diagnosis. The differential diagnosis will be briefly outlined and considered.

RECESS

Election of Officers and Business Meeting

(Note.—If some other time is decided upon, a standing notice to that effect will be placed on the Section's bulletin board.)

57. *Diverticulosis and Diverticulitis of the Colon*—Verne C. Hunt, M. D., Los Angeles.

A general statement regarding incidence and pathology of diverticulosis and diverticulitis of the colon; the clinical significance of diverticulosis; factors concerned with the advent of diverticulitis; consideration of clinical manifestations of diverticulitis, its complications and surgical indications; principles involved in the surgical procedures.

58. *Malignant Diseases of the Colon*—Harvey B. Stone, M. D., Baltimore, Maryland. (By invitation.)

Diagnosis in the right and left side of the colon as concerns malignant growth. Radical operation. Palliative treatment.

Discussion of symposium by Kenneth S. Davis, M. D., Los Angeles; Robert R. Newell, M. D., San Francisco; Leo Eloesser, M. D., San Francisco; Fred R. Fairchild, M. D., Woodland; and Clarence G. Toland, M. D., Los Angeles.



Third Meeting—Bali Room

Wednesday, April 26, 8:30 to 11:30 a. m.

59. *Diagnosis and Treatment of Subphrenic Abscess*—Howard W. Stephens, M. D., and Elliott Rouff, M. D., San Francisco.

The cases of subphrenic abscess at the University of California and San Francisco Hospitals during the past ten years are critically reviewed, to bring out helpful points in diagnosis and associated complications. Operative procedures are then detailed to demonstrate the best approach to the abscess, depending on its anatomical location.

Discussion by G. Lawrence Chaffin, M. D., Los Angeles, and Dexter N. Richards, M. D., Oakland.

60. *Experimental Gastro-Intestinal Anastomosis—Its Effect on the Secretory and Motor Functions of the Stomach*—Harold L. Thompson, M. D., Los Angeles.

Standard forms of gastro-intestinal anastomosis, used in the surgical treatment of peptic ulcer, were performed on normal stomachs of dogs. The effects of operation on the secretory and motor functions of the stomach were observed by fractional analysis of gastric content; the emptying time of the stomach was observed roentgenologically.

Discussion by Rea Smith, M. D., Los Angeles, and Asa W. Collins, M. D., San Francisco.

61. *Cancer of the Stomach*—John Homer Woolsey, M. D., San Francisco.

An analytical survey of the cases treated personally, with emphasis upon the reasons for late consultation with physicians and delay in proper treatment; a consideration of earlier diagnosis; what the conduct and care of such a condition would be, and the results of treatment.

Discussion by Wayland A. Morrison, M. D., Los Angeles, and Emile F. Hofman, M. D., San Francisco.

62. *Advances in the Treatment of Anorectal Fistula*—Montague S. Woolf, M. D., San Francisco.

Abscess formation precedes the majority of all fistulae. The anatomic arrangements of these abscesses is the basis of the position of subsequent fistulae and also of their treatment. There must be no question of impairment of sphincteric control after operations for fistula.

Discussion by William H. Kiger, M. D., Los Angeles, and Kirk H. Prindle, M. D., San Mateo.

63. *Deoxygenation—A Cause of Infection*—C. Van Zwalenburg, M. D., Riverside.

In appendicitis, intestinal obstruction and abscess, with hydraulic pressure—"hydraulic vicious circle"—closes the veins and capillaries, causing congestion and asphyxiation. The tissues thus deprived of oxygen become easy prey to anaërobic bacteria which grow and cause infection, necrosis and gangrene. Blood carrying the normal amount of oxygen prevents infection and overcomes it when present. Illustrated with a motion-picture film exhibiting the mechanics of acute appendicitis.

Discussion by LeRoy Brooks, M. D., San Francisco, and Francis L. Anton, M. D., Los Angeles.

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Fourth Meeting—Bali Room

Thursday, April 27, 8:30 to 11:30 a. m.

64. *Encephalography—Its Diagnostic and Therapeutic Value*—Mark Albert Glaser, M. D., Los Angeles.

Encephalography is of therapeutic and diagnostic value. The ventricles and subarachnoid spaces are outlined, thus visualizing abnormalities caused by brain tumors, epilepsy, insanity, birth injuries, and hydrocephalus. Troublesome post-traumatic headaches are relieved in some patients, and epileptic seizures may frequently be diminished or temporarily relieved.

Discussion by George H. Patterson, M. D., Los Angeles, and O. W. Jones, Jr., M. D., San Francisco.

65. *Osteomyelitis—A Clinical and Experimental Study*—Keene O. Haldeman, M. D., San Francisco.

The clinical pictures of chronic and acute infections of bone are explained on the basis of microscopic studies made on specimens removed surgically and at autopsy. A series of experimental osteomyelitis cases in rabbits completes the pathologic story from the onset of infection until chronicity is established. The relationship of pathologic observation to surgical practice is discussed.

Discussion by H. W. Spiers, M. D., Los Angeles, and George H. Sanderson, M. D., Stockton.

66. *Treatment of Fracture of the Os Calcis*—Lionel D. Prince, M. D., San Francisco.

Discussion of mechanics of injury and resultant pathology and deformity. Methods of treatment with special reference to the Boehler pin-traction method of reduction. A report of seventeen consecutive cases with comparative study of end-results, illustrated with lantern slides.

Discussion by A. E. Gallant, M. D., Los Angeles, and Edward C. Bull, M. D., San Francisco.

67. *Rolling-Pin Method of Reducing Fractures of the Wrist*—William Arthur Clark, M. D., Pasadena.

Direct pressure better than leverage and extension for reducing distal fragment of radius. Operator's fingers and thumbs too soft to push a hard, bony fragment. Direct pressure must be made first at the proximal edge of the distal fragment, not at a right angle, but as much longitudinally as possible. Best done with a small, wooden rolling-pin, applied to the posterior cortex and rolled down over the distal fragment. Final pressure at right angles.

Discussion by John Dunlop, M. D., Pasadena, and William F. Holcomb, M. D., Oakland.

68. *Improved Siphon System for Maintaining Continuous Drainage in Thoracic Empyema, or Intermittent Drainage in the Presence of Bronchofistula*—F. M. Pottenger, M. D., Jr., Monrovia.

A siphon system unaffected by bronchofistula or other sources of gas suitable for draining thoracic empyema or infections of any body cavity. The operation and physics will be described and illustrated by lantern slides. A short report of cases treated will also be given.

Discussion by Harry Glenn Bell, M. D., San Francisco, and Frank Stephen Dolley, M. D., Los Angeles.

VI

INDUSTRIAL MEDICINE AND SURGERY SECTION

JOHN N. OSBURN, M. D., *Chairman*

1010 Pacific Mutual Building

523 West Sixth Street, Los Angeles

WILLIAM S. KISKADDEN, M. D., *Secretary*

Wilshire Medical Building

1930 Wilshire Boulevard, Los Angeles

First Meeting—Private Dining Room

Wednesday, April 26, 8:30 to 11:30 a. m.

69. *Management of Flaps and Reconstructive Surgery*—Gerald Brown O'Connor, M. D., San Francisco.

Relative methods of flaps from point of view of their donor and recipient. Selectivity. Discussion of author's methods for obtaining grafts; operative application; preoperative care. (Lantern slides.)

Discussion by W. L. Miles, M. D., Los Angeles, and George Warren Pierce, M. D., San Francisco.

70. *Nonunion of Fractures*—C. Lewis Gaulden, M. D., Los Angeles.

Etiology. Bones most frequently affected. Treatment. (Lantern slides.)

Discussion by John Wilson, M. D., Los Angeles, and Samuel S. Mathews, M. D., Los Angeles.

71. *Functional Anatomy of the Knee Joint*—John B. de C. M. Saunders, F. R. C. S. (Edin.), Berkeley. (By invitation.)

The nature of the articular surfaces. Incongruity of articular surfaces as a principle of diarthrodial joints. The ligaments—Hilton's Law. The collateral ligaments. The semilunar cartilages. McConaill's theory of action as Mitchell pads. The mechanisms of their injury. Periarticular fat and synovia, its function and relationship to injuries.

72. *Fracture of the Tarsal Scaphoid*—J. Minton Meherin, M. D., San Francisco.

Incidence; types; methods of treatment including operative procedure. End-results. (Lantern slides.)

Discussion by Ralph Soto-Hall, M. D., San Francisco, and George Sanderson, M. D., Stockton.

73. *Newer Aspects of the Practice of Physical Therapy*—Shown by John Severy Hibben, M. D., Pasadena.

Résumé: Progress in physical therapy includes educational scientific research, hyperpyrexia by radiotherapy, electrosurgery, evaluation of ultraviolet light therapy and indications for the use of physical therapy by industrial surgeons, illustrated by motion pictures. Discussion by Leslie Langnecker, M. D., San Francisco, and H. M. F. Behneman, M. D., San Francisco.

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Second Meeting—Children's Play Room No. 1

Thursday, April 27, 8:30 to 11:30 a. m.

74. *Traumatic Rupture of the Bowel and Urinary Bladder*—Edmund Butler, M. D., San Francisco.

Diagnosis: Early signs and symptoms; late signs and symptoms; misleading findings. Treatment: early before peritonitis is generally established; after peritonitis is well established; treatment when it is impossible to operate.

Discussion by Alanson Weeks, M. D., San Francisco, and Wallace Dodge, M. D., Los Angeles.

75. *Surgical Treatment of Compression Fractures of the Vertebra*—John Dunlop, M. D., Pasadena.

Author's method of obtaining hyperextension and fixation of the spine. Comparison with other methods in use. (Lantern slides.)

Discussion by J. J. Loutzenheiser, M. D., San Francisco; Leroy Abbott, M. D., San Francisco; and J. W. Shilling, M. D., Los Angeles.

RECESS

Election of Officers and Business Meeting

(Note.—If some other time is decided upon, a standing notice to that effect will be placed on the Section's bulletin board.)

76. *Symposium on Industrial Poisonings.*

1. Carbon monoxid poisoning—Robert T. Legge, M. D., Berkeley.
2. Lead poisoning—Roy W. Hammack, M. D., Los Angeles.
3. Carbon tetrachloride poisoning—Verne R. Mason, M. D., Los Angeles.
4. Pneumoconiosis—Paul A. Quaintance, M. D., Los Angeles.

Discussion of symposium by Chauncey D. Leake, Ph. D., San Francisco, and Eugene S. Kilgore, M. D., San Francisco.



VII

NEUROPSYCHIATRY SECTION

CHARLES L. ALLEN, M. D., *Chairman*
Pacific Mutual Building

523 West Sixth Street, Los Angeles

H. DOUGLAS EATON, M. D., *Secretary*

Medical Office Building

1136 West Sixth Street, Los Angeles

First Meeting—Club Room

Wednesday, April 26, 8:30 to 11:30 a. m.

77. *Chairman's Address*—Charles Lewis Allen, M. D., Los Angeles.

78. *Lumbar Puncture in Intracranial Pressure*—Walter F. Schaller, M. D., San Francisco.

Personal experiences and experimental cerebrospinal hydrodynamics indicate a diagnostic rachicentesis to be a safe procedure when done according to a strictly defined technique.

Discussion by Edward B. Towne, M. D., San Francisco.

79. *Hemiplegia and Death Following Temporary Interruption of the Cerebral Circulation*—Thomas G. Inman, M. D., and F. C. Stewart, M. D., San Francisco.

The clinical history and autopsy report in a case of hemiplegia which followed a rapid fall in blood pressure. The symptoms and clinical findings pointed to a thrombosis of a cerebral vessel, but at autopsy no evidence of vessel occlusion could be found. Comments on prevention, diagnosis, and treatment of cerebral arteriosclerosis.

Discussion by Walter F. Schaller, M. D., San Francisco.

80. *The Coördinating Mechanisms of the Brain and Spinal Cord*—Samuel D. Ingham, M. D., Los Angeles.

The coördinating function of certain centers in the brain stem and spinal cord has never been sufficiently stressed or given very much clinical application. A careful review seems to show that a direct connection of the pyramidal tract with the anterior horn cells and the motor cranial nerve nuclei has never been demonstrated. On the other hand it seems that the pyramidal tract connects directly with the above mentioned coördinating mechanisms in the brain stem and spinal cord. The physiology and the clinical application of these mechanisms are presented.

*Second Meeting—Club Room*

Thursday, April 27, 8:30 to 11:30 a. m.

81. *Migraine*—Victor L. Mann, M. D., Los Angeles.

The migraine equivalent affects about eight per cent of the people. It stimulates other conditions, causes errors in diagnosis and inappropriate treatment, thus contributing to an incredible percentage of psychoneurotics. Its extensive effects, its hereditary nature, its relationship to epilepsy and allergy are accounted for on

the basis of its endocrino-vegetative metabolic origin.

Discussion by Samuel D. Ingham, M. D., Los Angeles.

82. *Chemical and Physiological Reactions of the Body to Hyperpyrexia Baths and Their Significance in the Epileptic Syndrome*—Helen Hopkins, M. D., Los Angeles.

Chemical and physiological responses to hyperpyrexia induced by hot baths.

Blood chemical analyses reveal states of alkalosis, anoxemia, hydremia, hypoglycemia, falling diffusible serum calcium and rising serum phosphorus within the body, changes having direct activating influence upon convulsive tendency. Respiratory, cardiac and vascular changes have additional effect upon activity of nervous elements.

Patients presenting epileptic syndrome not in constant state of susceptibility to convulsions. During inactive phases induction of seizures not always accomplished even in presence of well established chemical and physiological alterations favoring appearance.

RECESS

Election of Officers and Business Meeting

(Note.—If some other time is decided upon, a standing notice to that effect will be placed on the Section's bulletin board.)

83. *Commitment Laws in California and Elsewhere*—Glenn Myers, M. D., Los Angeles.

Hospital care of mentally ill patient often deprives patient of his liberty. Necessary to safeguard patient's legal rights. A questionnaire has disclosed that most foreign countries facilitate admission of mental patients to institutions. Comparison of proceedings in United States and foreign countries. Data and discussion of most desirable features in a commitment law.

Discussion by Herman Adler, M. D., San Francisco.

84. *Post-Traumatic Sequelæ, with Special Reference to Convulsive States*—Frederick P. Shafer, M. D., Los Angeles.

Analysis of three hundred cases with review of literature to determine late effects of a head injury. After acute effects subside, disabling sequelæ often arise. Convulsive states exist in about six per cent, divided into three groups: focal epilepsy, hystero-epilepsy, and true traumatic epilepsy. Differentiation of hystero- from the true post-traumatic epilepsies. Analysis of other symptoms and neurological signs will be considered. Vestibular tests and value of encephalography.

Discussion by Mark Glaser, M. D., Los Angeles.



VIII

OBSTETRICS AND GYNECOLOGY SECTION

EDMOND M. LAZARD, M. D., *Chairman*
Wilshire Medical Building

1930 Wilshire Boulevard, Los Angeles

EMIL J. KRAHULIK, M. D., *Secretary*

Taft Building

1680 North Vine Street, Los Angeles

First Meeting—Copper Cup Room

Monday, April 24, 2 to 5 p. m.

85. *The Problem of Dysmenorrhea*—L. A. Emge, M. D., San Francisco.

Discussion of various types of dysmenorrhea with particular emphasis on their relation to the endocrine apparatus. Further discussion will deal with types of dysmenorrhea, explainable on constitutional, psychogenic, endocrine and mechanical basis. The new aspects of treatment of the various types will form the conclusion of the discussion.

86. *Ectopic Pregnancy*—Leon J. Tiber, M. D., Los Angeles.

Discussion of two hundred cases treated at the Los Angeles County General Hospital. Symptomatology, diagnosis, findings, and time of operation will be analyzed.

Relation of morbidity and mortality to the time of operation, and to the type of transfusion used. Special emphasis directed to the results obtained with autotransfusion.

87. *The Extraperitoneal Cesarean Section, Using the Method of Latzko*—Abraham Bernstein, M. D., and Louis I. Breitstein, M. D., San Francisco.

Latzko cesarean section is the true extraperitoneal operation, and lessens incidence, morbidity, and mortality rate. May be performed after repeated vaginal examinations or attempted forceps. A well-developed lower uterine segment is a prerequisite for operation. Operation should be performed only in potentially infected cases, after a full test of labor, and avoided in frankly infected cases. (Lantern slides.)

88. *Relation of the Curability of Cervical Cancer and the Duration of Symptoms*—Daniel G. Morton, M. D., San Francisco.

Analysis of 167 cases of cervical cancer showed that only 21 per cent had had symptoms of two months or less. Regardless of the stage of advancement, 45 per cent of this small group survived for more than five years. This is in marked contrast to the 20 per cent cure obtained for the entire series, and emphasizes graphically the importance of warning symptoms. Shows the possibilities of cures with present methods. The necessity for excluding cancer in all cases of bleeding is illustrated, as is the need for public education.

89. *A New Vaginal Retractor*—Henry L. White, M. D., Red Bluff.

Demonstration of a self-retaining, operating retractor. This retractor has been used for nearly five years, by the author, in the following operations: anterior colporrhaphies, resections of the cervix, placing of radium, and dilatations and curettements.

Second Meeting—Copper Cup Room Tuesday, April 25, 8:30 to 11:30 a. m.

90. *Chairman's Address—Porro Cesarean Section*—Edmond M. Lazard, M. D., Los Angeles.

Definition. History of Porro cesarean section. Modernized technique of this operation. Indications. Analysis of cases. Results: (1) mortality, (2) morbidity. Consideration of advisability of elective Porro for purpose of sterilization.

91. *Termination of Pregnancy in Eclampsia*—Donald G. Tollefson, M. D., Los Angeles.

The question of terminating pregnancy in toxemic patients depends on parity, period of gestation, and their response to conservative treatment. After onset of convulsions, consensus of opinion in favor of control of eclamptic seizures and disregard of pregnancy. While magnesium sulphate may not control convulsions, it reduces patient's surgical hazard greatly. In primiparous patients, even without obstetrical indications, cesarean section is occasionally indicated in interest of both mother and child. Analysis of nearly five hundred convulsive and preëclamptic toxemias reveal lowered mortality from operative intervention where patient is first given benefit of conservative measures.

RECESS

Election of Officers and Business Meeting

(Note.—If some other time is decided upon, a standing notice to that effect will be placed on the Section's bulletin board.)

92. *Cervical Dystocia*—W. Clifford McKee, M. D., Los Angeles.

Definition. Anomalies and histologic changes. Pathologic changes due to infection, cauterization, plastic operations, birth and dilatation injuries. Associated dystocias. Uterine inertia.

Prognosis. Discussion of methods of treatment: expectant, bag, manual dilatation, incision, cesarean section.

93. *The Membranes in Labor*—Norman H. Williams, M. D., Los Angeles.

Influence of premature rupture of membranes—spontaneous and artificial. Membranes may be obstructive in labor. "Dry labor" not primarily a complicated labor. Less maternal injury in early rupture of the membranes. Infant injuries not increased in "dry labor." Comparison of cases in which membranes (1) rupture late in labor, (2) rupture spontaneously early in labor, and (3) ruptured artificially early in labor.

94. *The Management of Diabetes in Pregnancy*—James W. Sherrill, M. D., La Jolla.

Incidence of diabetes and pregnancy. Infrequency of conception before the advent of insulin. Occurrence of glycosuria and atypical reducing substances during pregnancy. Importance of classifying glycosurias. Changes in carbohydrate tolerance and insulin dosage associated with pregnancy. Incidence of heredity. Sociological aspects. Report of cases.



IX

PATHOLOGY AND BACTERIOLOGY SECTION*

FREDERICK PROESCHER, M. D., *Chairman*
Santa Clara County Hospital, San Jose

GEORGE D. MANER, M. D., *Secretary*
Wilshire Medical Building

1930 Wilshire Boulevard, Los Angeles

ELMER W. SMITH, M. D., *Assistant Secretary*
2200 Hayes Street, San Francisco

First Meeting—Children's Play Room No. 2 Monday, April 24, 2 to 5 p. m.

95. *Chairman's Address*—Frederick Proescher, M. D., San Jose.

96. *Round Table Discussion—Pathology of Encephalitis*—R. M. Van Wart, M. D., Los Angeles; C. B. Courville, M. D., Los Angeles; Frederick Proescher, M. D., San Jose, and Charles E. Nixon, M. D., Fresno.

- 96a. *Experimental Evidence of Reflex Control of the Coronary Blood Flow*—Charles M. Green, M. D., Pacific Grove. (By invitation.)

97. *Round Table Discussion—Tumor and Trauma*—Zera Bolin, M. D., San Francisco, in charge.



Second Meeting—Children's Play Room No. 2 Tuesday, April 25, 8:30 to 11:30 a. m.

98. *Round Table Discussion on Psittacosis*—Karl Meyer, Ph. D., San Francisco; J. B. Luckie, M. D., Pasadena, and Alvin G. Foord, M. D., Pasadena.

99. *Round Table Discussion on Bacteriophage—Its Theory and Practical Clinical Application*—Albert Krueger, M. D., Berkeley; J. F. Kessel, Ph. D., Los Angeles, and J. Homer Woolsey, M. D., San Francisco.

RECESS

Election of Officers and Business Meeting

(Note.—If some other time is decided upon, a standing notice to that effect will be placed on the Section's bulletin board.)



Third Meeting—Auditorium

Joint Meeting of General Medicine with Pathology and Bacteriology Section

Wednesday, April 26, 8:30 to 11:30 a. m.

The program of this joint meeting is printed under the third meeting of the General Medicine Section.

* The Section on Pathology and Bacteriology presents no formal papers. All meetings are round table discussions. Section rule Number 7, concerning synopses, therefore does not apply.

X

PEDIATRIC SECTION

WILLIAM M. HAPP, M. D., *Chairman*
919 Pacific Mutual Building
523 West Sixth Street, Los Angeles
HENRY E. STAFFORD, M. D., *Secretary*
242 Moss Avenue, Oakland

First Meeting—Copper Cup Room
Wednesday, April 26, 8:30 to 11:30 a. m.

SYMPOSIUM ON ALLERGY

100. *Introduction—Chemical Basis of Allergy*—Hobart Rogers, M. D., Oakland.

Experimental investigation of immunity and anaphylaxis has defined certain chemical attributes of antigens and antibodies. Plausible speculations are advanced regarding phenomena dependent on their interaction. Study of human hypersensitiveness indicates general resemblances but also specific differences best explained by assuming a peculiar protoplasmic constitution in affected individuals.

101. *Eczema in Infancy and Childhood*—H. J. Templeton, M. D., and V. G. Alderson, M. D., Oakland.

Solution of problem demands coöperation of dermatologist, pediatrician, and allergist. Infantile eczema the result of hypersensitive skin being acted upon by a noxious stimulus, either exogenous or endogenous in origin. External irritants play minor rôle. Internal irritants occasionally foci of infection, usually food allergens at fault.

Careful histories and elimination diets of first importance while scratch tests are of less practical value in locating foods at fault. Urbach's work of considerable interest.

102. *Local Treatment of Eczema*—Hiram E. Miller, M. D., San Francisco.

Local treatment varies with the type of eczema and its location. The proper remedy must be properly prepared and applied to produce satisfactory results. Lotions, wet dressing, pastes, ointments, ultraviolet light, and x-ray therapy will be discussed. Mechanical measures, hospitalization, and general care of the eczematous skin will be considered. (Lantern slides.)

103. *Asthma in Childhood*—Hyman Miller, M. D., Los Angeles.

Early recognition of asthma or potential asthma in allergic child best accomplished by clinical observation guided by the concept that asthma is but one aspect of the lifelong constitutional allergic state. Leads to early recognition, results of skin testing, function of elimination diets and prophylaxis against sequelae and complications based on information gleaned from 1411 children at the Los Angeles Children's Hospital allergy clinic and 7000 individuals seen in private and clinic practice.

104. *Some Points About the Home Management of Asthmatic Children*—William Belford, M. D., San Diego.

Some points about the care of the asthmatic child in the home are presented, mentioning the need of complete coöperation of the parents, some food problems, home environment and the importance of the inhalant group of allergens.

Discussion of symposium by Edward S. Babcock, Jr., M. D., Sacramento, and Paul Michael, M. D., Oakland.



Second Meeting—Copper Cup Room
Thursday, April 27, 8:30 to 11:30 a. m.

105. *Chairman's Address*—William M. Happ, M. D., Los Angeles.

106. *Resistance to Eating Among Preschool Children*—Herbert R. Stolz, M. D., Berkeley.

Emphasis by pediatricians in recent medical contributions reflects the experience of many

physicians who deal with the problems of child rearing, as well as with definite disease entities among children.

Discussion of results of the investigation on child resistance to eating by Institute of Child Welfare at the University of California, with special reference to types of resistance, casual factors, prevention and treatment.

Discussion after reading of 107.

RECESS

Election of Officers and Business Meeting

(Note.—If some other time is decided upon, a standing notice to that effect will be placed on the Section's bulletin board.)

107. *The Undernourished Child*—Howard L. Eder, M. D., Santa Barbara.

Preventorium care the best treatment. Type of home only partly responsible. Change of environment big factor. Children from eight to twelve years show greatest improvement. Follow-up clinics necessary. Frequent turn-overs advisable. Results obtained in 120 cases summarized. (Lantern slides.)

Discussion by Edward J. Lamb, M. D., Santa Barbara, and Randolph Flood, M. D., San Francisco.

108. *Committee Report on Communicable Disease Prevention*—Edward B. Shaw, M. D., San Francisco.

A committee on the Pediatric Section has collaborated in outlining routine directions for communicable disease prophylaxis. These directions specify indication, age, choice of immunizing material, technique, precautions and all data significant to routine procedures of prophylaxis. This outline is presented for discussion by the Section.

Discussion by Walter M. Dickie, M. D., and W. H. Kellogg, M. D., Berkeley; William Palmer Lucas, M. D., and Karl Meyer, Ph. D., San Francisco.



XI

RADIOLOGY SECTION

HENRY SNURE, M. D., *Chairman*
1501 South Figueroa Street, Los Angeles

ROBERT S. STONE, M. D., *Secretary*
University of California Hospital
San Francisco

First Meeting—Club Room
Monday, April 24, 2 to 5 p. m.

109. *Unfiltered X-Ray in Large Doses in the Treatment of Superficial Malignancies*—William H. Sargent, M. D., Oakland.

A preliminary report upon the immediate results of unfiltered x-ray in treatment of superficial malignancies. The importance of dosage. What constitutes a large dose, and those factors which may influence it, especially the port, are considered. The character of the reaction and the condition of the parts after recovery are discussed and compared with those obtained by filtered radiation. A brief survey of the conditions in which it may be used is given, with a report of several cases so treated.

Discussion by H. J. Ullmann, M. D., Santa Barbara.

110. *Treatment of Carcinoma of the Tonsils and Pharynx*—William E. Costolow, M. D., Los Angeles.

A general discussion on the malignancies of the tonsil and pharynx, describing the methods of treatment, and giving a description of the radiation technique. Also case reports of some of the cases which have been personally treated and observed.

Discussion by L. Henry Garland, M. D., San Francisco.

111. *Some Recent Developments in Radiotherapy of Cancer*—A. C. Christie, M. D., Washington, D. C. (By invitation.)

112. *Radiation Treatment of Carcinoma of the Uterus*—Lyle C. Kinney, M. D., San Diego.

The treatment of carcinoma of the cervix involves no controversy between surgery and radiology. The question properly arises as to the indications for surgery, for radiation or for the use of both. Except in the earliest cases limited to the surface of the cervix, the adnexa or glands are involved in one-third of the operable cases. Either surgery or radiation to be adequate must be directed to the elimination of carcinoma as far out as the wall of the pelvis.

Discussion by Frank W. Lynch, M. D., San Francisco.

RECESS

Election of Officers and Business Meeting

(Note.—If some other time is decided upon, a standing notice to that effect will be placed on the Section's bulletin board.)

Report of Committee on Costs—R. R. Newell, M. D., San Francisco.

113. *The Roentgen-Ray Treatment of Carcinoma of the Breast, with Special Reference to the Inoperable Case*—John M. Rehfsch, M. D., and L. Henry Garland, M. D., San Francisco.

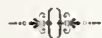
Statistics unreliable: (a) breast carcinoma protean lesion, (b) controls difficult, and (c) radiation techniques too varied. Value of conclusions from single, comparatively small series treated by one technique. Pathological theory; minimum requirements for preoperative radiation; serious dangers. Technique for practical postoperative radiation. Dangers. Results to expect. The inoperable carcinoma. Logical and humane aim used in treatment.

Discussion by William E. Costolow, M. D., Los Angeles.

Second Meeting—Bali Room Joint Meeting of General Surgery with Radiology Section

Tuesday, April 25, 8:30 to 11:30 a. m.

The program of this joint meeting is printed under the second meeting of the General Surgery Section.



XII

UROLOGY SECTION

JAMES C. NEGLEY, M. D., *Chairman*
Brack Shops Building
527 West Seventh Street, Los Angeles
LEWIS MICHELSON, M. D., *Secretary*
Medico-Dental Building
490 Post Street, San Francisco

First Meeting—Tower Room

Monday, April 24, 2 to 5 p. m.

114. *Chairman's Address—The Cold Quartz Ultra-Violet Ray as a Therapeutic Agent in Urology*—James C. Negley, M. D., Los Angeles.
115. *Surgical Treatment of the Doctor's Prostate*—J. G. Thompson, M. D., Rochester, Minnesota. (By invitation.)
116. *Symposium on Resection of Bladder Neck Obstruction as Performed by the Urological Staff of the Los Angeles County General Hospital.*
- (a) Type of cases best suited to resection, both as to general condition and type of obstruction. Pre- and postoperative care—Harry W. Martin, M. D., Los Angeles.
 - (b) Type of apparatus and technique used, both that of electric energy and urethral instruments—Roger W. Barnes, M. D., Los Angeles.
 - (c) A comparative series of cases from the same hospital, by the open suprapubic approach, the perineal approach and instruments other than resectoscope—Jay J. Crane, M. D., Los Angeles.
 - (d) The end results of resectoscope operations as to function, general condition and

mortality statistics, accidents encountered and complications—Paul A. Ferrier, M. D., Los Angeles.

117. *Resectoscopic Hazards*—A. M. Meads, M. D., Oakland.

This is a review of thirty-six consecutive cases from the standpoint of poor results only. These are classified as to type, cystoscopic findings and autopsy findings. The conditions leading up to the unsatisfactory termination of each case is explained, and suggestions are made for the avoidance of the same.

Discussion by Robert V. Day, M. D., Los Angeles, and Henry A. R. Kreutzmann, M. D., San Francisco.



Second Meeting—Tower Room

Tuesday, April 25, 8:30 to 11:30 a. m.

118. *Treatment of Tumors of the Testis as Regards the Indications for Radical Operation*—Frank Hinman, M. D., San Francisco.

The clinical problem of teratoma testis. (a) Differences of opinion regarding pathology. (b) Differences of opinion regarding the clinical problem. The status of radical operation. (a) Indications and contraindications. (b) Technic of the operation. Conclusions.

Discussion by W. B. Parker, M. D., Los Angeles, and James R. Dillon, M. D., San Francisco.

119. *Injuries of the Female Bladder Incident to Surgery*—William E. Stevens, M. D., San Francisco.

Accidental incision and tearing of the bladder as well as serious damage to this organ without perforation are more common during pelvic operations than is generally appreciated. Operations during which bladder injuries are most likely to occur. Subjective symptoms and objective findings. Case reports. Treatment. (Lantern slides.)

Discussion by Herbert A. Rosenkranz, M. D., Los Angeles, and L. P. Player, M. D., San Francisco.

RECESS

Election of Officers and Business Meeting

(Note.—If some other time is decided upon, a standing notice to that effect will be placed on the Section's bulletin board.)

120. *Traumatic Rupture of the Kidney*—George F. Schenck, M. D., Los Angeles.

Incidence. Causative agents. Sex, age, predisposing factors. Pathology. Diagnosis. Symptoms, when present, vary widely in degree of severity, frequently delayed in appearance. Treatment, indications as to the expectant or immediate surgical interference. Value of follow-up in observation and treatment. Report of cases. (Lantern slides.)

Discussion by Charles P. Mathé, M. D., San Francisco, and Clarke M. Johnson, M. D., San Francisco.

121. *Urinary Calculi Treated in a Railway Hospital*—Burnett W. Wright, M. D., Los Angeles.

A preliminary report on a study that is being made of the probable etiological factors having to do with the frequent occurrence of urinary calculi among the employees on the Coast Lines Division of the Santa Fe Railroad. (Lantern slides.)

Discussion by T. E. Gibson, M. D., San Francisco.

122. *Perforation of the Bladder by Pelvic Abscess*—Dudley P. Fagerstrom, M. D., San Jose.

Source of pyuria is at times difficult to determine, when a careful investigation does not reveal evidence of infection of the upper urinary tract or of the sexual appendages. The possibility of a pelvic abscess communicating with the bladder should always be considered. Review of literature. Report of cases, and x-ray films.

Discussion by George W. Hartman, M. D., San Francisco.

PRE-CONVENTION BULLETIN

Section 3 of Article XII of the California Medical Association Constitution states in part: "The Association, prior to the annual session, shall print a 'Pre-Convention Bulletin,' which shall contain reports of officers and committees. . . . A copy of the 'Pre-Convention Bulletin' shall be given to each delegate and alternate, on or before registration."

REPORTS OF GENERAL OFFICERS

REPORT OF THE PRESIDENT

To the House of Delegates:

The President desires to report that during the year he has performed the duties of his office to the best of his ability, having visited various parts of the state, speaking before some of the County Medical Associations, addressing some of the Woman's Auxiliaries, and attending in so far as was practicable, the various boards and committees of which he is ex officio a member, and taking an active part in their deliberations.

Respectfully submitted,

Joseph M. King, *President*.

REPORT OF PRESIDENT-ELECT

To the President and the House of Delegates:

The President-Elect has attended the meetings of the various committees of which he is an ex-officio member, and has studied the matters submitted in an earnest endeavor to acquaint himself with the problems, so that he may best serve the welfare of the Association and the wishes of the membership.

Respectfully submitted,

George G. Reinle, *President-Elect*.

REPORT OF THE SPEAKER OF THE HOUSE OF DELEGATES

To the President and the House of Delegates:

The Speaker desires to thank all officers, committees, and delegates for their coöperation during the past year.

In view of the large number of important matters to come before the House of Delegates at this meeting, it is hoped that there may be a full attendance and that all delegates and alternates will familiarize themselves with the reports of the officers and committees in this issue of CALIFORNIA AND WESTERN MEDICINE.

In accordance with the by-laws, the following committees are hereby appointed:

Credentials Committee—Benjamin W. Black of Alameda County (chairman), Charles T. Sturgeon of Los Angeles County, and Dexter R. Ball of Orange County.

Reference Committee on Reports of Officers and Standing Committees—Alson R. Kilgore of San Francisco County (chairman), E. Eric Larson of Los Angeles County, and William Dock of San Francisco County.

Reference Committee on New and Miscellaneous Business—William R. Molony of Los Angeles County (chairman), Irving S. Ingber of San Francisco County, and Charles E. Schoff of Sacramento County.

There will be two sessions of the House of Delegates during this convention: on Monday and Wednesday evenings at eight o'clock sharp, and both in the Assembly Room of the hotel.

Respectfully submitted

Edward M. Palette, *Speaker*.

REPORT OF SECRETARY-TREASURER

To the President and the House of Delegates:

Surprising as the statement may be, the year 1932 showed growth in membership and no inroad on the surplus recorded for the previous year. By reason of the new activities inaugurated by the House of Delegates, saving was decreased from an average yearly gain of \$9,000 to but \$99.22.

The membership of the California Medical Association on December 31, 1932—active, associate, honorary, and retired members—numbered 5,035, thirty-one more than on the same date of the previous year.

The Placement Bureau recorded many more applications for medical and stenographic help than heretofore. But eighteen stenographers and eight physicians, a smaller number than in any previous year secured positions. No calls for technicians were received.

Since the last annual session there have been five meetings of the Council—one, the reorganization meeting at Pasadena on the last day of the annual session; one held at Los Angeles, and three in San Francisco. Four others will be held during this session at Del Monte. There were but three meetings of the Executive Committee—one, a reorganization meeting in conjunction with the first Council meeting in San Francisco; one held in December to comply with the requirements of the Constitution and By-Laws; and one at the order of the Council to carry out work assigned by that body. Nine meetings of the Public Relations Committee—five in San Francisco and four in Los Angeles—have been held since the last annual session. The total number of Association meetings for 1931-1932 being, therefore, twenty-one.

It should be noted that reports for membership and for finances are for the fiscal year from January 1, 1932, to December 31, 1932, while those for committee meetings, records of the Placement Bureau, etc., are taken from one annual session to the next. An attempt was made to correct this discrepancy by change of the fiscal year. But since time is required to audit the books of the Association for presentation before the House of Delegates meeting, the change was not possible.

There has been no change in assistants in the office of the State Association. Increase of duties, due to increase in the number of meetings held, to the innovation of a new bookkeeping system, to changes in the editorial department, and to increase in membership has been assumed capably and cheerfully. Normal increase in membership adds increase in duties so gradually that only through comparison is a correct picture presented. Membership has doubled since 1915; whereas 350 members registered at Coronado in 1916, 1200 have been registered for several years past; and whereas only a few thousand dollars were handled through the Association books then, approximately \$75,000 is now handled yearly.

Component County Society secretaries deserve most sincere thanks for their able and unfailing attention to the duties of their office and their helpful coöperation with the State office. Whether due to careful selection of peculiarly qualified members or to introduction of efficient business methods in their offices, the result is gratifying and the sincere thanks of the State Secretary is accorded to the secretaries of all the Component County Medical Societies.

REPORT OF THE TREASURER

Finances—General Review.—The finances of the Association hold peculiar interest for members of the

House of Delegates. The chairman of the Auditing Committee will present and explain in full the financial audit. A general review of the appended audit shows a balance sheet and three profit and loss divisions, one of the accounts of the California Medical Association, one of the JOURNAL of the California Medical Association, and one of the funds transferred by the California Medical Association to the corporation "Trustees Of The California Medical Association." Included with the 1932 audit are ten schedules that give itemized information on (a) cash assets; (b) general office expense; expenses of (c) legal department; (d) of annual meeting; (e) of the Council; (f) of various committees; (g) Department of Public Relations. Detailed information is appended to the statement of CALIFORNIA AND WESTERN MEDICINE, itemizing, respectively, JOURNAL subscriptions, production and distribution costs of JOURNAL, and general and clerical expenses. Full information wanted on costs of any item can, through these appended schedules, now be found.

This financial statement, as audited and certified by Mr. Hugh Ross, is submitted as the report of the treasurer.

Respectfully submitted,
Emma W. Pope, *Secretary-Treasurer.*

* * *

FINANCIAL REPORT FOR CALENDAR YEAR 1932

Balance Sheet

DECEMBER 31, 1932

ASSETS	
Cash	\$35,229.49
Accounts receivable:	
Advertisers in Journal.....	\$4,814.68
Miscellaneous	24.80
Deposit in United States Post Office....	75.00
	4,914.48
Deferred charges:	
Rent paid in advance.....	367.50
Office equipment:	
Cost	6,701.90
Less depreciation	2,416.53
	4,285.37
	\$44,796.84
LIABILITIES	
Note payable:	
Wells-Fargo Bank and Union Trust Co.	3,500.00
Accounts payable:	
Sundry	374.73
Deferred income:	
Dues collected in advance.....	250.00
Reserve fund:	
Herzstein Bequest	2,539.35
	\$ 6,664.08
NET	
Surplus	113,455.61
Less transferred to "Trustees Of The California Medical Association".....	75,322.85
	38,132.76
	\$44,796.84
DETAIL	
CASH	
Wells-Fargo Bank and Union Trust Co.:	
Current account	\$ 1,662.97
Revolving funds:	
Salary	\$ 1,300.00
General	1,000.00
Petty cash	50.00
	2,350.00
Savings' accounts:	
Anglo California National Bank.....	13,063.88
Security First National Bank of Los Angeles	11,498.65
Wells-Fargo Bank and Union Trust Co.	6,653.99
	31,216.52
	\$35,229.49
January 1, opening balance.....	\$115,038.80
Adjustment for 1931.....	150.00
	\$115,188.80
Gain or loss for year:	
Association	Gain \$3,701.03
Journal	Loss 5,434.22
Loss	
	1,733.19
	\$113,455.61
Less transferred to "Trustees Of The California Medical Association".....	75,322.85
	\$ 38,132.76

I. Association Division—Profit and Loss	
Number of members.....	4,975
INCOME	
County society dues.....	\$49,490.00
Less allocated to Journal	
1/5	9,898.00
Other income:	\$39,592.00
Interest	\$1,294.27
Exhibits at annual meeting	1,640.00
Services to medical society	600.00
Sales of directory.....	2.50
Addressograph revenue.....	16.97
	3,553.74
Total income.....	\$43,145.74
EXPENSE—See Schedules A to F	
A. General expense.....	\$12,966.82
B. Legal department.....	4,109.00
C. Annual meeting expense..	3,607.12
D. Council expense.....	898.57
E. Committees' expense.....	5,166.72
F. Department of Public Relations	7,909.75
Delegates to American Medical Association convention	1,077.62
Directory of members.....	908.40
Subscriptions:	
Lane Medical Library.....	\$1,392.00
Barlow Medical Library.....	1,392.00
	2,784.00
Losses	16.71
Total expense.....	\$39,444.71
NET	
Gain for year.....	\$ 3,701.03

DETAIL

1932 COUNTY SOCIETY DUES

Year	Rate	Rate	Members	Amount
1932	Year	\$10.00	4,871	\$48,710.00
1932	Half year	5.00	98	490.00
1932	Associates	5.00	6	30.00
	Total		4,975	\$49,230.00
Dues collected for prior year:				
1931	Year	\$10.00	24	\$ 240.00
1931	Half year	5.00	4	20.00
				\$49,490.00

SCHEDULES OF EXPENSE

(A) GENERAL EXPENSE	
Salaries:	
Secretary	\$3,844.44
Clerical	4,100.04
	\$ 7,944.48
Taxes:	
Federal tax on checks.....	5.20
San Francisco, personal property.....	46.39
	51.59
Rent	2,052.00
Postage	339.24
Telephone and telegrams.....	364.61
Office:	
Supplies	1,063.95
Expense	290.08
Sundry	229.69
Depreciation office equipment.....	631.18
	2,214.90
	\$12,966.82
(B) LEGAL DEPARTMENT	
General counsel:	
Retainer	\$4,000.00
Legal fees and expense.....	102.00
Supplies	7.00
	\$4,109.00
(C) ANNUAL MEETING EXPENSE	
Badges	\$ 253.41
Installation	434.78
Invited guests	1,061.56
Hotel and entertainment.....	1,152.87
Printing, stationery and sundry.....	704.50
	\$3,607.12
(D) COUNCIL EXPENSE	
Transportation	\$875.12
Sundry	23.45
	\$898.57

(E) COMMITTEES' EXPENSE		
Executive Committee:		
Transportation	\$ 193.30	
Sundry	1.00	
Extension lectures:		\$ 194.30
100 reprints lecture course.....		8.00
Public Relations Committee:		
Transportation	1,046.85	
Advanced attorney for expenses.....	1,035.00	
Roy Kelly on Medical Plan.....	138.20	
Cancer Commission:		2,220.05
Salaries, clerical	1,080.00	
Rent	450.00	
Postage	125.15	
Telephone and telegrams.....	35.19	
Office supplies	260.39	
Office expense	5.02	
Sundry expense	12.20	
Transportation	204.13	
Clinical and Research Prizes:		2,172.08
Clinical Prize	150.00	
Research Prize	150.00	
Framing, lettering and express.....	14.19	
500 reprints of prize papers.....	40.50	
Scientific Sections:		354.69
Letter heads for twelve sections.....		70.00
Others:		
Committee on Survey of Expenditures		72.60
1500 copies of booklet "A Standard of Clinics"		75.00
		\$5,166.72
(F) DEPARTMENT OF PUBLIC RELATIONS		
Salaries:		
Director	\$4,800.00	
Clerical	1,085.16	
		\$5,885.16
Rent		900.00
Postage		247.25
Telephone and telegrams.....		81.96
Office expense:		
Supplies	327.66	
Expense	50.47	
Sundry	117.05	
		495.18
Transportation		300.20
		\$7,909.75

II. Journal Division—Profit and Loss		
Number of copies issued		69,150
INCOME		
Advertising	\$25,792.74	
Subscriptions	11,556.67	
Sale of review books.....	180.00	
Total income.....		\$37,529.41
EXPENSE—See Schedules H, K, I.		
Journal:		
Production	\$24,023.87	
Distribution	2,332.77	
Selling expense:		26,356.64
Advertising commission..	4,183.90	
Collection expense and discounts	105.42	
Advertising	33.00	
Promotion:		4,322.32
Journals furnished to:		
Advertisers	522.00	
Exchange journals.....	345.00	
Complimentary	189.00	
General expense.....	1,056.00	
Bad debts.....	10,873.87	
	354.80	
Total expense.....		\$42,963.63
		\$39,592.00
NET		
Loss for year.....		\$ 5,434.22

SCHEDULES H, K AND L	
(H) SUBSCRIPTIONS	
County Society dues allocated.....	\$ 9,898.00
Nevada Medical Association.....	164.00
Cash sales	438.67
Journals to advertisers.....	522.00
Journals to others.....	534.00
	\$11,556.67

(K) JOURNAL PRODUCTION	
Cost	\$22,406.55
Proof changes	740.00
Illustrations	877.32
	\$24,023.87
JOURNAL DISTRIBUTION	
Correcting mailing list	\$ 720.00
Wrappers	292.00
Postage	1,080.77
Mailing	240.00
	\$2,332.77
(L) GENERAL EXPENSE	
Salaries:	
Editorial	\$5,222.20
Clerical	3,749.96
	\$8,972.16
Rent	1,020.00
Postage	414.72
Telephone and telegrams.....	126.82
Office expense:	
Supplies	236.15
Expense	101.02
Sundry	3.00
	340.17
	\$10,873.87

III. Trustees of California Medical Association	
Balance Sheet	
DECEMBER 31, 1932	
ASSETS	
Cash, savings accounts:	
Bank of America, Humboldt branch..\$	782.56
Crocker First Federal Trust Co.....	12,969.50
Wells-Fargo Bank & Union Trust Co.	14,406.95
	\$28,159.01
Bonds:	
Liberty Fourth 4¼% par \$24,000.....	23,902.50
Treasury 4% 1944-54 par \$25,000.....	25,093.75
	\$48,996.25
Total assets	\$77,155.26
LIABILITIES	
Accounts payable	Nil
NET	
Surplus paid in:	
California Medical Association.....	\$75,322.85
Surplus from earnings:	
To December 31, 1932.....	1,832.41
	\$77,155.26
PROFIT AND LOSS	
Income:	
Interest on bonds and savings accounts	\$2,155.26
Expense:	
December, 1931—Opening of books and accounting services	\$150.00
Books and supplies.....	12.85
April, 1932—Premium on bonds of secretary and chairman.....	50.00
May, 1932—Permit from Division of Corporations	10.00
Audit of accounts for fiscal year and application for exemption from tax	100.00
Total expense	322.85
Net:	
Surplus from earnings to December 31, 1932	\$1,832.41

IV. Herzstein Bequest	
For Suppression of Quackery in the Practice of Medicine	
RECEIPTS	
July, 1929 Cash	\$ 941.20
July, 1930 Cash	746.58
Dec., 1930 Interest earned by fund.....	65.78
July, 1931 Cash	842.30
Dec., 1931 Interest earned by fund.....	76.12
July, 1932 Cash	849.88
Dec., 1932 Interest earned by fund.....	89.80
	\$3,611.66
PAYMENTS	
1932 Public health exhibits.....	\$1,072.31
NET	
December 31, 1932 Balance in fund.....	\$2,539.35

Summary of Earnings				
Year	Association Gain	Journal Loss	Trustees Gain	Total Gain
1932	\$3,701.03	\$5,434.22	\$1,832.41	\$99.22

Auditor's Statement

San Francisco, Calif.
February 23, 1933.

I have audited the books of account and records of the California Medical Association for the year 1932, and hereby certify that the foregoing balance sheet and relative profit and loss accounts and statements attached hereto exhibit a true record of the financial affairs of the Association for the year.

HUGH ROSS.

REPORT OF THE EDITOR*To the President and the House of Delegates:*

The report herewith submitted will deal with the number of papers received, printed, awaiting publication, and declined. A few words of explanation in regard to the figures which follow may be in order. As the California Medical Association has grown, the number of scientific sections has increased. In the four-day annual session a sufficient number of papers are read to more than supply a monthly publication of twice the size of CALIFORNIA AND WESTERN MEDICINE. In order to provide diversity in the printed contents of the official publication and to be in position to publish important current medical matter, it has become necessary for the Committee on Publications, with the sanction of the Council, to accept only a limited number of papers from each annual session section. However, many papers in which specialty topics are discussed in detail find a ready outlet in the various specialty journals. These various difficulties are discussed in the CALIFORNIA AND WESTERN MEDICINE leaflet, "Suggestions to Authors." A copy of this sixteen-page leaflet will be sent to any member upon request to the San Francisco office of CALIFORNIA AND WESTERN MEDICINE.

During the last year, special emphasis has been given to papers and discussions on medico-economic topics and to subject matter having a special interest for California physicians.

The financial report of CALIFORNIA AND WESTERN MEDICINE will be presented to the House of Delegates. In spite of material reductions in general overhead expenses, the official journal has had a stormy financial year. This has been due to the general economic condition of the last several years which led a considerable number of long-standing advertisers to withdraw their announcements. Earnest efforts have been made to keep down this advertising loss as much as possible.

The report on papers received, printed, awaiting publication, and declined follows:

(a) Report on Annual Session Papers of 1932—Pasadena Session.

At the 1932 Pasadena annual session a total of 135 papers were read before the different sections. A summary of last year's annual session papers follows:

Pasadena annual session papers published in 1932.....	16
Pasadena annual session papers published in 1933.....	13
Pasadena annual session papers read (but published elsewhere, declined or not sent in).....	76
Pasadena annual session papers in CALIFORNIA AND WESTERN MEDICINE files still awaiting publication (annual session papers in this April issue still to be deducted).....	30

Total Pasadena annual session papers were.....135

(b) Report on All Special Articles Which Have Been Printed in California and Western Medicine During Period April 1932 to April 1933 Issues, Inclusive.

Special and original articles which were published in CALIFORNIA AND WESTERN MEDICINE during the past year (April 1932 to April 1933 issues, inclusive) are as follows:

Section papers from 1930 annual session (Del Monte session)	1
Section papers from 1931 annual session (San Francisco session).....	28
Section papers from 1932 annual session (Pasadena session)	26
California Medical Association prize papers Pasadena session).....	2
Papers read before General Session (Pasadena session)	3
Lure of Medical History articles.....	19
Papers from Nevada State Medical Association meetings	4
Papers read before county and other medical societies	5

Papers accepted from miscellaneous sources (original articles, abstracts of speeches, reprints from other publications, etc.).....	27
Clinical and Case Report articles.....	41
Editorial Comment articles.....	26
Bedside Medicine symposia.....	12

Total papers published during past year.....194

(c) Report on Manuscripts in California and Western Medicine Files and Awaiting Publication.

CALIFORNIA AND WESTERN MEDICINE has on hand manuscripts which have been accepted and which are awaiting publication in issues of April, 1933, and later.

Unpublished papers from 1932 annual session (Pasadena)	31
Unpublished papers read before county and other societies	1
Unpublished papers not read before other societies..	11
Unpublished papers read before Nevada Association	3
Lure of Medical History articles.....	5
Clinical and Case Report articles.....	28
Editorial Comment articles.....	6
Bedside Medicine symposia.....	3

Total manuscripts on hand awaiting publication.... 88

(d) Report on Nonannual Session Papers Submitted.

A total of fifty-four papers from county societies and other sources which were submitted for publication in CALIFORNIA AND WESTERN MEDICINE this past year (April 1932 to April 1933, inclusive) could not be accepted for various and special reasons:

Nonannual session papers submitted, but declined.... 54

It must be evident from the above figures that the official journal has been favored by the cooperation of a large number of members of the California Medical Association. To all who have submitted papers, and especially to those members who have so often aided in making the special feature departments and discussions of live interest, the Committee on Publications is deeply appreciative and expresses its thanks.

Respectfully submitted,

George H. Kress, *Editor.*

REPORT OF THE COUNCIL CHAIRMAN*To the President and the House of Delegates:*

The full report of the Council cannot be printed in the *Pre-Convention Bulletin*. It is read at the first meeting of the House of Delegates after submission to the Council at its meeting on Sunday preceding the annual session.

The complete report will consist of a résumé of the work accomplished by the Council and the problems which have confronted it throughout the year.

The chairman of the Council desires to state that the attendance at Council meetings has been almost 100 per cent, and that the good of the Association has had the earnest attention and cooperation of all its members.

Respectfully submitted,

O. D. Hamlin, *Chairman.*

REPORTS OF DISTRICT COUNCILORS**FIRST COUNCILOR DISTRICT**

San Diego, Riverside, Orange and Imperial Counties

To the President and the House of Delegates:

The councilor for the First District has attended all meetings of the Council and has visited all the societies in the district at least once during the past year.

It is a pleasure to be able to report that all county societies in the district are in very satisfactory condition. Membership has been maintained, the quality of work done in the scientific meetings has been excellent, and a healthy interest in medical economics has been maintained. All of these societies have very satisfactory relations with the county hospitals and public health officials. The San Diego society has evolved a most practical and interesting plan for the handling of clinic and part-pay patients and its practical application is being followed with much interest by the other communities in which these problems are pressing for solution.

Respectfully submitted,

W. W. Roblee, *Councilor,*
First District.

SECOND COUNCILOR DISTRICT
Los Angeles County

To the President and the House of Delegates:

A résumé of the membership roster for 1932 of the Los Angeles County Medical Association presents some remarkable figures. There was a total of 2,009 members reported by the secretary in his annual report, of which 1,866 paid full dues of \$22. Forty-five were received on the half-yearly basis at \$11, two came in at \$10, and one at \$7. Those not paying dues were distributed as follows: Seventeen were military members, fifty-six were honorary, twenty were on leave of absence, and two were from other counties. The branches showed a membership as follows:

	Members
Alhambra	18
Glendale	33
Monrovia	13
Pomona	22
Southeast	20
San Fernando	43
Santa Monica	64
Southwest	14
Harbor	108
Pasadena	111

As for 1933, it is probable that there will be a loss of membership, though not so great as in many of the county associations in the industrial centers of the East. It is interesting to note that on March 1, 1932, 1501 members had paid dues for the year, while on March 1, 1933, 1319 had paid dues—a drop of 182.

During 1932 a definite step was taken in the matter of permanent quarters for the Association by trading properties for the northeast corner of Wilshire and Westlake upon which was a building which has been remodeled and equipped for headquarters with an auditorium of sufficient size to accommodate the average attendance, with other rooms for section meetings, and there is now being installed a catering department.

When financial conditions warrant, a library building will be erected on the upper portion of the lot in which will be housed the Barlow Medical Library. The scientific work of the sections and branches has never been better, and the attendance has been outstanding. The various committees have functioned with universal efficiency, especially those having to do with medical economics, hospitals, dispensaries, and clinics, showing plainly that the members have come to a realization of the value of organization and the need of mass action.

The Woman's Auxiliary shows no abatement in interest, and it is the belief of the councilor of this district that the increased interest of the membership is in no small measure due to the efforts of this organization. There is a need of active committee work in the auxiliary. Under the able leadership of Mrs. A. B. Cooke, former president of the Ebell Club, much may be expected this year in this line of endeavor. The splendid women who have carried this work from its inception deserve the highest commendation from the profession.

Respectfully submitted,
William Duffield, *Councilor,*
Second District.

THIRD COUNCILOR DISTRICT

Kern, San Bernardino, San Luis Obispo, Santa Barbara and
Ventura Counties

To the President and the House of Delegates:

All the county societies in the district are showing great interest in medical economics, much more so this year than previously, and earnest efforts are being made to assist those in moderate and more than moderate financial circumstances to meet the cost of hospitalization and medical care. Discussion was heard on all sides in regard to periodic payment contracts for both hospital service and medical care; and in two counties, Santa Barbara and Kern, schedules of reduced rates for those having incomes below a certain stated sum have been drawn up. In Santa Barbara it is an informal arrangement between the doctors and Saint Francis Hospital, and in Kern County there is a Kern Medical Economy Group authorized by the

Kern County Medical Society. Anyone wishing information as to the formation of this group and the fee schedule, should write to Dr. Seymour Strongin, San Joaquin Hospital, Bakersfield, secretary of the Kern County Medical Society, for details.

The most interesting County Hospital situation in the district, from a constructive standpoint, is that in San Bernardino County, where the County Hospital has been placed in complete charge, both medical and business, of the Medical Advisory Board, consisting of five doctors representing the five supervisors and each appointed by his own supervisor. The superintendent of the hospital is in absolute control and hires and discharges all employees, subject to the Medical Advisory Board. It really amounts to the Medical Advisory Board running the hospital through the superintendent, as chief executive. They have just completed a second revision of salaries, and these two revisions have cut \$100,000 from an original budget of \$240,000 and this was accomplished in spite of a 30 per cent increase in the work of the hospital. The success of the plan quite definitely lies in the cooperation between the hospital, the medical society, and the welfare service. The hospital will take in no pay patients, that is, patients who can pay anything at all. Paragraph A-3 of the Summary of Recommendations takes care of the frequently arising situation, which is often the cause of considerable discussion.

"A-3. Cases where applicant can pay something toward his treatment. Every such case will be referred to the regional member of the Medical Advisory Board with a statement of the facts. Every effort will be made to have the work done at home for the money available. The physician referring such patients shall be given the first opportunity to do this work. If he cannot or will not do it, the member of the Medical Advisory Board handling the case will make arrangements with another physician to have the work done. If, however, such arrangements cannot be made, the case should be referred back to the original branch of the welfare service for admission as a charity case."

Only charity cases are admitted to the clinic or hospital, except industrial accident cases in county employees. Nonindustrial accidents or diseases of county employees or illness or injury in a county employee's family are treated in the same manner as any other case. Of course, the handling of tuberculosis, contagious or other similar cases, as provided by law, are taken care of in the usual manner. These patients will pay fees individually adjusted for services in those departments, as this is regarded as a public health function and therefore is a justified expenditure. Apart from these classes, no fees will be charged or collected. Anyone interested in the entire recommendation and details of the working of this plan in San Bernardino County should write to Dr. E. J. Eytinge, secretary of the County Medical Society, Redlands.

No report will be made on the status of the suits against the supervisors of Santa Barbara or Kern counties, as they will be taken up under the report of the counsel.

Respectfully submitted,
H. J. Ullmann, *Councilor,*
Third District.

FOURTH COUNCILOR DISTRICT

Calaveras, Fresno, Inyo, Kings, Madera, Mariposa, Merced, Mono,
San Joaquin, Stanislaus, Tulare and Tuolumne Counties

To the President and the House of Delegates:

I herewith submit the following report as councilor of the Fourth District.

Councilor visits were made to each organized society in the Fourth District at least once during the fiscal year. The outstanding point noticed was that there was a greater unity among the members of the local units, a more keen interest shown in medico-economic affairs, and an aroused consciousness of the necessity for firmer union among medical men.

Fresno County unit has the largest membership in the district. They have quite an active Public Relations Committee, which is most interested in working out a medico-social plan built around the principles

previously adopted by the Council at its September meeting.

Tulare, Merced, and Stanislaus County units are all active societies, having regular, well-attended meetings.

San Joaquin County unit also has a very active Public Relations Committee, whose members are carefully studying the various plans for the betterment of medico-social problems and conditions.

The membership in all these societies maintains about the numerical ratio as in previous years. Medical men in the counties of the Fourth District which have no local units have membership in adjacent units. Hence the ratio of society members to licentiates in this district compares favorably with other sections in the state.

Respectfully submitted,

Fred R. DeLappe, *Councilor*,
Fourth District.

FIFTH COUNCILOR DISTRICT

Monterey, San Benito, San Mateo, Santa Clara and Santa Cruz Counties

To the President and the House of Delegates:

There has been nothing outstanding in events throughout the Fifth District during the past year.

The membership and attendance of members of the various county societies has not materially changed. All meetings have been well attended and have been interesting and instructive.

The problems of medical economics have been frequently discussed, but as yet no definite action has been taken by any of the component societies.

Respectfully submitted,

Alfred L. Phillips, *Councilor*,
Fifth District.

SIXTH COUNCILOR DISTRICT

San Francisco County

To the President and the House of Delegates:

During the past year the local members of the Association have made greater strides than ever before in the studies of our mutual problems.

There have been many meetings of special and general groups, where there has been careful consideration of the many economic problems that face us. The spirit, earnestness of purpose, and individual effort for the common good has been most commendable.

Medical protective insurance, health and hospital insurance, credit information, and medical legislation have occupied the time of the membership for almost the entire year. While the studies have not solved our problems, they are leading us toward what we hope may be solutions, and have been a great factor in welding the society into a closer unit.

The adoption of a new constitution has given us a better working basis, and now there are nine very active committees and a section on economics who help to facilitate and accelerate the work of the board of directors.

We look forward to a year of very hard and intensive work, but feel, from the spirit shown by the membership, that, while success cannot be expected within that time, we will be well on our way toward that goal.

Respectfully submitted,

Karl L. Schaupp, *Councilor*,
Sixth District.

SEVENTH COUNCILOR DISTRICT

Alameda and Contra Costa Counties

To the President and the House of Delegates:

The outstanding activities of the Alameda County Medical Association during the past year have been along medical economic lines. The county society has developed and is sponsoring a plan for the care of patients in that economic group which is immediately above indigency and, therefore, not eligible to county care but who are unable to pay the physician's entire

fee. The plan has been in operation for three months. The number of cases handled is rapidly increasing. The entire membership has been giving enthusiastic support to the project, and its operation appears at the present time to be reasonably satisfactory.

The periodic payment plan for hospital service, as proposed by the California Medical Association, is in process of development. The county association, together with the representatives of all of the standard hospitals in the East Bay area, are at present working upon the details of the plan.

A campaign of ethical publicity has been undertaken by the County Medical Association, and through a publicity committee and a paid publicity agent, medical news is being published regularly in the newspapers of the East Bay.

Feeling the desirability of early affiliation with organized medicine for the young man, our association has amended our constitution, permitting young men to enjoy the benefits of membership at a financial obligation within their reach. A junior associate membership has been added, which is open to men who have been in practice less than two years, with annual dues of \$5.

The economic situation in the country at large has had a definite effect upon our organization, and it is with regret that we note the loss of more members than have entered during the year. The number of delinquent members at this writing is higher than at the same period in any previous year.

Respectfully submitted,

O. D. Hamlin, *Councilor*,
Seventh District.

EIGHTH COUNCILOR DISTRICT

Alpine, Amador, Butte, Colusa, El Dorado, Glenn, Lassen, Modoc, Nevada, Placer, Plumas, Sacramento, Shasta, Sierra, Sutter, Tehama, Yolo and Yuba Counties.

To the President and the House of Delegates:

The councilor of the Eighth District attended all the meetings of the Council held at the Huntington Hotel during the past session of the California Medical Association. He also attended the September meeting in Los Angeles and the January meeting in San Francisco. He has taken care of the necessary correspondence with the secretaries of the various county societies in his district and has attended meetings of the Sacramento Society for Medical Improvement and all the meetings of the Placer County Medical Society.

This year, with the assistance of Doctor Dickie, director of the Department of Public Relations, and Dr. Junius B. Harris, he held several meetings with the Placer County Board of Supervisors at which the supervisors agreed to operate the new Placer County Hospital as the Placer County Charity Hospital, and to admit no pay patients.

There has been no dissension nor have there been any difficulties or problems in any of the county societies comprising the Eighth District which required the attention of the district councilor.

Respectfully submitted,

Robert A. Peers, *Councilor*,
Eighth District.

NINTH COUNCILOR DISTRICT

Del Norte, Humboldt, Lake, Marin, Mendocino, Napa, Siskiyou, Solano, Sonoma, and Trinity Counties

To the President and the House of Delegates:

A brief report of the medical societies' activities in the Ninth Councilor District during the year 1932 is submitted:

All of the medical societies in this district have been visited with the exception of the Humboldt County Society, which is generally visited the latter part of March. Mendocino County Society has been reorganized and held two meetings, the last meeting being held at the State Hospital at Talmage. The members seem to be quite enthusiastic over the re-formation of their society.

A joint meeting was held under the auspices of the Napa County Society at the Claremont Country Club

in Oakland, at which there were medical representatives from most of central California to listen to a comprehensive discussion on "Medical Economics" by Mr. Hartley Peart, Dr. Daniel Crosby, and Dr. Benjamin Black.

The societies in this district are all quite active. The meetings and the attendance of the meetings and enthusiasm of the members, shows the interest each individual physician is taking in the county and state society. We are finding that joint society meetings, with an afternoon of golf for those who wish to play, followed by a dinner and scientific meeting, is very popular, and draws physicians from the bay sections as well as local members.

Respectfully submitted,
Henry S. Rogers, *Councilor,*
Ninth District.

REPORTS OF COUNCILORS-AT-LARGE*

To the President and the House of Delegates:

As councilor-at-large for the California Medical Association, my chief endeavor has been to acquire intelligent information concerning the activities of the various committees in the organization and the many complex problems presented to the Council for its deliberations and decisions, particularly with respect to the work undertaken by the Committee on Public Relations.

It has been my sincere effort to deliberate with an open mind and to arrive at conclusions that would best serve the entire medical profession.

I have attended all the regular Council meetings and group meetings of the southern members.

Apart from the regular work of the Council, I have continued my special interest in the department of mental diseases and the relation of the medical profession to the handling of the insane in the State of California. The group engaged in this study has concluded its work for the year with the formulation of a new commitment law for California which we believe will bring California into line with the more progressive States in the matter of commitment and handling of the mental unfortunates. That proposed law is embodied in Assembly Bill 539 and has been approved by so many of the public-spirited individuals and organizations of the state that we feel confident of its passage. I feel that the State Association may take some just pride in having a part in the movement.

Respectfully submitted,
George G. Hunter, *Councilor-at-Large.*

To the President and the House of Delegates:

Since my appointment as councilor-at-large of the California Medical Association to complete the unexpired term of Dr. Ruggles A. Cushman, resigned, there has been but one meeting of the Council. I was much interested in the questions that came before that body and their deliberations, but I felt reluctant about taking any active part for the reason that I believed it was best for me to first become acquainted with the work of the Council.

It is my intention to visit the San Diego, Riverside, and the Imperial County Medical Societies before the state meeting in April.

A very splendid annual session of the Western Hospital Association was held in Long Beach during three days of February. There were many members and officers of the State Medical Association in attendance.

Respectfully submitted,
Harry E. Zaiser, *Councilor-at-Large.*

* The elected members of the Council consist of six councilors-at-large, nine district councilors, each of the latter representing a district or group of counties. These councilors-at-large, as officers, have their official responsibilities. Article XII, Section 3, which provides for a "Pre-Convention Bulletin," states that the bulletin shall contain a report from every officer. To that end the councilors-at-large were requested to send in reports on any matters in which they were interested and which perhaps might be worthy of consideration by the reference committees and the House of Delegates.

To the President and the House of Delegates:

The year that is just closing has been a very trying one to the medical profession in an economic way, but I feel that the things that will develop from the conditions that have been forced upon us will eventually work out for our benefit.

The county hospital situation of taking pay patients who are financially able to go elsewhere is a very vital question not only for the doctor, but also for the private hospitals and the taxpayers. We hope that what has been started this year may clear the atmosphere of these conditions.

The Department of Public Relations has done an enormous amount of work, and has suggested plans that may work to the good of the whole profession.

The Cancer Commission is continuing its activities and compiling statistics that should be very helpful to the profession at large.

The other activities of the Council have doubtless been thoroughly covered by the reports of the officers, and I will not discuss them.

Respectfully submitted,
W. H. Kiger, *Councilor-at-Large.*

To the President and the House of Delegates:

The activities of this particular councilor-at-large have been more in and about San Francisco and the office of the Association than in extensive traveling about the state.

The interest in the activities of the California Medical Association shown by the members of the bay region has been almost confined to those dealing with medico-economic problems and the matters of group medical and hospital services, and it seems that almost every county society is studying the problems quite carefully and seriously.

It is an immensely difficult problem that faces the profession due to the hesitation shown by many of its members to embark upon any sort of coöperative endeavor and to throw overboard many of the old canons of professional practice.

However, some attempts at solution will undoubtedly be made, and it would seem that the California Medical Association could best serve by carefully and intelligently fostering the study of any projected efforts and protecting the profession from too much outside interference with its own methods of solution.

It is the opinion of this councilor that the time is here when it is necessary for the Association to use every effort and resource to aid in the control or development of any changes that may be proposed or that may occur.

Respectfully submitted,
T. Henshaw Kelly, *Councilor-at-Large.*

To the President and the House of Delegates:

Inasmuch as the undersigned councilor-at-large is also chairman of the Committee on Public Policy and Legislation, almost his entire services to the Association have been devoted to subjects and duties connected with this committee. There has been a notable and laudable awakening in matters of public policy and legislation throughout the entire profession of our state. Never before has the medical man been as keenly alive to the pressing problems that confront him, and this interest has brought about the formation of some very valuable groups both in the northern and in the southern regions. These have effected liaison with other professional groups, who have added their strength in maintaining the present high standard of professional ethics and practice.

Talks before county societies throughout the state, committee work with the Department of Public Relations, and conferences with county and state legislative groups comprise your councilor's major activities for the year.

Respectfully submitted,
J. B. Harris, *Councilor-at-Large.*

REPORTS OF STANDING COMMITTEES*

COMMITTEE ON ASSOCIATED SOCIETIES AND TECHNICAL GROUPS

Executive Group

R. Manning Clarke, Chairman, 1934
William H. Geistweit, 1933 Clifford Sweet, 1935

To the President and the House of Delegates:

I beg to submit the following as the annual report for the year 1932, during which time my committee has served as the Committee on Associated Societies and Technical Groups.

In submitting this report, I wish to say that it is the observation of your chairman that there is one thing that has happened in all societies and technical groups with which we have had contact. And that is, that as their difficulties have greatly increased they have greatly increased their efforts. Everybody has worked harder, with the result that organizations are better perfected, and everyone is welded into a stronger working group than ever before. This is one blessing, I believe, that has come out of the depression and troubles that have beset us all.

In reporting on the Woman's Auxiliary to the California Medical Association, I wish to say that they have made the most advancement and done the hardest work of any group I know. The auxiliary came into being in San Diego four years ago, and there are now thirteen counties, splendidly organized and working beautifully, with a membership of 829. These accomplishments are the direct result of the high type of leadership displayed by each succeeding president. Their activities have to do with social, philanthropic, legislative, educational and public relations activities. To those who have been interested and followed their work, it has been nothing short of phenomenal. Some of the counties really should have special mention for the accomplishments they are bringing about. It would seem to me that Riverside County has shown such a splendid organization, such indomitable spirit, and their accomplishments have taken them so far in this particular line that special mention in their behalf would not be out of place. The Woman's Auxiliary of California have been specially honored by the election of one of its members, Mrs. James F. Percy of Los Angeles, to the national vice-presidency. Through the death of the president, Mrs. Freeman, Mrs. Percy has succeeded to the presidency. Her splendid ability is being felt in the national organization, and no doubt at the end of her term of office there will be great things to report from that particular quarter.

In my report on the dental society, I wish to say that activity in the leading scientific questions of their field has received more than its usual attention this year. Many meetings have been held, and prominent speakers brought before large audiences. The question of vitamins and diet in its influence over dental caries, etc., has received much consideration.

The greatest thing, however, that has come up in the dental group is their interest in dental economics. They have had contact with our own Doctor Graves and his committee. They have been much impressed and much interested. Committees are being appointed in large county societies for the investigation of this matter. The Los Angeles County Dental Association has recently appointed a committee of five prominent men from the southland who are charged with the responsibility of making definite reports as to what the Los Angeles County Dental Association should do in the matter of dental economics, especially with respect to simulating the example of the California Medical Association in the steps it has already taken in pioneering the economic field.

Our dietitians are as active as usual. They have fine leadership, and their meetings are an inspiration. Our president, Dr. Joseph King, was unable to keep his appointment with them, and sent the writer to represent him with an address of welcome at their last meeting in Los Angeles. The meeting was well attended, well conducted, and helpful in every way. Sev-

eral members of the California Medical Association were before them with fine talks, notably Doctors Verne Mason, Eaton MacLeod Mackay, W. J. Leake, Angus MacDonald, Howard Cooder, and Agnes Morgan.

Respectfully submitted,
R. Manning Clarke, *Chairman*.

COMMITTEE ON EXTENSION LECTURES

Executive Group

Robert T. Legge, Chairman, 1934
J. Homer Woolsey, 1933 James F. Churchill, 1935
The Secretary, ex officio

To the President and the House of Delegates:

The Committee on Extension Lectures have the honor to report for the year 1932-1933 as follows:

During the past year, probably on account of the economic depression, there have been very few inquiries for Extension Lectures. Other factors that have lessened the demand for this service are the multiplicity of medical meetings in our cities (easily reached by rapid transportation), the monthly staff meetings with programs in our large hospitals, and the many county society meetings in sections for different specialties. Selected and private medical societies prevail, and the medical schools offer popular and scientific lecture courses, besides the many national societies that annually meet in our state.

The secretary has a number of able speakers on subjects of great interest available, many of which are original contributions to medicine. The committee urges and invites the members of our society to offer their services and to list their subjects with the secretary so that they may be available when solicited by secretaries of our various county societies.

During the past year there were listed a number of selected medical films, which may be procured in some instances gratis and in others on payment of a loan fee. Many of these films demonstrate some of the newer developments in surgical and laboratory technique, in preventive medicine, and popular medical subjects for the laity.

Your committee suggests and recommends that the state society develop and undertake to broadcast medical subjects on certain evenings, enabling county meetings to listen in and hear notable visiting speakers on popular and scientific medicine. By this means the Stanford University popular lectures, Academy of Medicine, Lane Lectures, University of California guest speakers, etc., could be enjoyed by the physicians throughout the state.

Respectfully submitted,
Robert T. Legge, *Chairman*.

COMMITTEE ON HEALTH AND PUBLIC INSTRUCTION

Executive Group

Fred B. Clarke, Chairman, 1935
W. R. P. Clark, 1933 Langley Porter, 1934

To the President and the House of Delegates:

The committee's activities for the year 1932 might be divided into two major activities:

First: Coöperation with the other members of the Public Relations Department in a comprehensive plan for the rendering of medical and hospital care to people of moderate means.

Second: Development of educational exhibits at the major fairs of the state—Sacramento and Pomona.

There has been a great deal of favorable comment upon the exhibits developed by the Committee on Health and Public Instruction, and I am quite convinced that, for the money expended, they are well worth while.

It is my belief that the State Association should extend their activities along this line and make it possible to bring these exhibits to a greater number of the larger fairs in the state during the coming year.

EDUCATIONAL ACTIVITIES

Radio Broadcasting.—Two years ago, and again last year, I made certain suggestions regarding radio broadcasting. Inasmuch as the Los Angeles County

* Members of Standing Committees are urged to meet during the annual session and organize for the coming year and to hold at least one regular meeting of their respective committee during the annual session.

Medical Association broadcast twice a week over KECA and KFI, two of our larger stations, I thought that it might be possible to have a state hook-up, using the same material. Apparently this has not been possible, but it is to be hoped that such arrangement can eventually be made.

Educational Literature.—It is our belief that closer sympathy should exist between the patient and the doctor. That the patients should be more conversant with the various problems which confront the medical profession but which are more important to the public. It is quite possible, and I believe that the Public Relations Department should prepare a series of twelve pamphlets dealing with the prevention of disease and symptoms pointing to early recognition of disease. These pamphlets could be distributed through each county unit to members of the Association who could mail them out to patients with the monthly statements.

We must find some way for a little better understanding and closer contact with the public because some of these days it will be very necessary to be able to contact a large group for the purpose of preventing adverse legislation.

Speakers' Bureau.—It is our earnest suggestion that each county medical society develop a speakers' bureau, using care in the selection of men and the subjects to be presented, and then make it their business to furnish speakers to the Parent-Teacher Associations, women's clubs, service clubs, and commercial organizations. This has been done in various places and certainly would be a means of bringing the laity in closer contact with the subject they are vitally interested in.

Need for Greater Interest on the Part of the Profession in Preventive Measures.—Immunization of children against diphtheria, smallpox, etc., has apparently not been an active concern of the average doctor. They have been content to permit this field of medicine to be taken over by public health agencies. It is highly important that the physicians should be made conversant with this field not only from the standpoint of the health of the boys and girls, but in order that they will be in closer contact with their patients. Suggestions should be worked out by the Public Relations Department, and the coöperation of all county societies secured in carrying them out.

Respectfully submitted,
Fred B. Clarke, *Chairman.*

COMMITTEE ON HISTORY AND OBITUARIES

Executive Group

Charles D. Ball, Chairman, 1935
Emmet Rixford, 1933 George D. Lyman, 1934
The Secretary, ex officio The Editor, ex officio

To the President and the House of Delegates:

Since the last session, the California Medical Association has lost sixty-seven members through death. The names of these colleagues who are no longer with us follow.

IN MEMORIAM

Bemis, Orion Irving, died at Modesto, December 7, 1931, age 62.
Hamman, Amos F., died September, 1931, age 57.
Langley, Elmer Ellsworth, died November 12, 1931, age 49.
Mahoney, Margaret Josephine, died at San Francisco, December 7, 1931, age 73.
Barkema, Roelf, died January 2, 1932, age 38.
Copeland, John Charles, died at San Diego, December 31, 1931, age 59.
Emerson, Henry K., died at Los Angeles, January 1, 1931, age 63.
Smith, Sydney Henry, died at San Francisco, December 17, 1931, age 52.
Walter, William Alexander, died at Los Angeles, December 25, 1931, age 51.
Brill, Selling, died at San Francisco, January 23, 1932, age 33.
Salisbury, Samuel S., died at Los Angeles, February 1, 1932, age —.
Sampson, Jacob Henry, died at San Francisco, February 9, 1932, age 66.
Tillmanns, Ernest Gustav Nathaniel, died at Los Angeles, January 25, 1932, age 51.
Atkinson, Leonard Woods, died at Patton, February 27, 1932, age 73.
Cothran, Abraham Lincoln, died at San Jose, February 23, 1932, age 67.

Craycroft, Harry Judge, died at Fresno, March 18, 1932, age 55.
Durney, Charles Paul, died at San Jose, March 20, 1932, age 46.
Gerlach, August Alison, died at Oakland, March 15, 1932, age 34.
Cook, Joseph Wright, died in Persia in 1932, age 49.
Davidson, Anstruther, died at Los Angeles, April 3, 1932, age 72.
Kempff, Louis Adolph, died March 27, 1932, age 51.
Miller, Albert Leonard, died at Yuba City, March 22, 1932, age 61.
Reed, Wallace Allison, died at Covina, March 27, 1932, age 43.
McCoy, George W., died at Los Angeles, April 21, 1932, age 61.
Culver, George DeWitt, died at San Francisco, May 9, 1932, age 55.
Smith, Walter Edward, died at San Francisco, April 24, 1932, age 52.
Raiche, Bessica Faith Medlar, died at Santa Ana, April 9, 1932, age 56.
White, Carlos Moulton, died at Visalia, November 6, 1931, age 59.
Burns, Richard Earl, died at Castro Valley, May 24, 1932, age 48.
Heppner, Maurice, died at San Francisco, May 22, 1932, age 39.
Leas, John Augustus, died May 26, 1932, age 48.
Lockwood, Charles Daniel, died at Pasadena, June 11, 1932, age 64.
Milligan, Edward T., died April 1, 1932, age —.
Shinohara, Masakichi, died May 27, 1932, age 49.
Walker, Agnes, died at San Francisco, June 6, 1932, age 59.
Whiteway, Harold Morse, died June 7, 1932, age 67.
Wylie, Daniel Baldwin, died May 22, 1932, age 70.
Beck, Emil G., died at Oakland, July 1, 1932, age 66.
Iglick, Samuel, died July 7, 1932, age 78.
Johnson, Hans Coford, died July 8, 1932, age 48.
Magnusson, Herman Victor, died at Bell, July 1, 1932, age 56.
Dickson, Charles S., died at Riverside, May 23, 1932, age 83.
Arthur, Edgar Allen, died at Stockton, July 12, 1932, age 69.
Crandall, Henry Floyd, died at Oceanside, July 16, 1932, age 58.
Durand, Charles Joseph, died at Sacramento, July 7, 1932, age 46.
McKillop, John Edwin, died at Santa Monica, July 25, 1932, age 48.
Boller, Phillip, died at Los Angeles, August 29, 1932, age 45.
Coll, Daniel, died at Susanville, August 30, 1932, age 37.
Cotton, William Clement, died at San Francisco, August 21, 1932, age 50.
Deane, Tenison, died at San Francisco, September 1, 1932, age 66.
Friesen, J. Frank, died at Los Angeles, September 8, 1932, age 52.
Hagadorn, Jesse Lee, died at San Gabriel, September 5, 1932, age 60.
Wing, Peleg Benson, died at San Diego, August 12, 1932, age 72.
Mattison, Fitch C. E., died September 16, 1932, age 71.
Brenner, Charles Raymond, died at San Diego, September 17, 1932, age 45.
Brown, Page, died at Los Angeles, September 29, 1932, age 77.
Curtiss, Charles Lester, died at Redlands, September 27, 1932, age 54.
Fraser, Alexander Isaac, died at Bakersfield, October 6, 1932, age 64.
Hammond, Robert Ray, died at Stockton, October 2, 1932, age 58.
Mishkin, Jacob, died at Los Angeles, September 19, 1932, age 59.
Stevens, Burt Smith, died at San Francisco, October 7, 1932, age 58.
Burgeson, Daniel Leroy, died at Los Angeles, September 11, 1932, age 39.
Clark, William Amie, died at Rochester, October 28, 1932, age 61.
Kern, William B., died at Los Angeles, October 14, 1932, age 65.
Voisard, Francis Xavier, died at Sacramento, November 5, 1932, age 63.
Fenton, Susan J., died at Oakland, October 26, 1932, age 85.

* * *

Twenty-four obituaries were printed:

Margaret Mahoney	Charles S. Dickson
Selling Brill	Agnes Walker
Leonard Woods Atkinson	Charles D. Lockwood
Joseph Wright Cook	Charles Joseph Durand
Anstruther Davidson	Fitch C. E. Mattison
Ernest Gustave Tillmanns	J. Frank Friesen
George W. McCoy	Charles Lester Curtiss
George DeWitt Culver	Daniel Leroy Burgeson
Bessica Faith Medlar Raiche	Robert Ray Hammond
Carlos Moulton White	William A. Clark
Walter Edward Smith	Susan J. Fenton
Charles Paul Durney	Burt S. Stevens

The committee again urges every county society to appoint a committee on history to gather historical

papers of pertinent interest, so that the same may be available later for historical compilation.

Respectfully submitted,
Charles D. Ball, *Chairman*.

COMMITTEE ON HOSPITALS, DISPENSARIES AND CLINICS

Executive Group

John C. Ruddock, Chairman, 1935
Wallace Dodge, 1933 Karl L. Schaupp, 1934

To the President and the House of Delegates:

In compliance with the Constitution and By-Laws concerning the report of standing committees of the California Medical Association, the Committee on Hospitals, Dispensaries, and Clinics makes the following report.

During the year 1932-1933 there have been no formal meetings of the committee. During the year just completed, the chairman of the Committee on Hospitals, Dispensaries, and Clinics has been a member of the Executive Committee of the Department of Public Relations of the California Medical Association, and as such member has attended all meetings, with the exception of two, held by the Department of Public Relations.

The Committee on Hospitals, Dispensaries, and Clinics has submitted to the Department of Public Relations a bill, known as the Clinic Bill, to be introduced in the California State Legislature at the present session. This bill has been carefully gone over by the Department of Public Relations and has been approved both by them and by the Council of the California Medical Association, and has been introduced into the California State Legislature and is now known as Assembly Bill No. 1277.

The committee feels that with the passage of this Act by the present legislature that they will have accomplished a very constructive program for regulation of the practice of medicine and have safeguarded the public against many forms of quackery which now exist under the designation of clinics, and institutions of like import.

Respectfully submitted,
John C. Ruddock, *Chairman*.

COMMITTEE ON INDUSTRIAL PRACTICE

Executive Group

Daniel Crosby, Chairman, 1934
Matt H. Arnold, 1933 Morton R. Gibbons, 1935

To the President and the House of Delegates:

The committee has been struggling with the question of x-ray fees, and it is hoped to have something submitted to the Council for its acceptance as a principle before the state meeting. Any report upon it prior to its acceptance by the Council we regard as premature.

Respectfully submitted,
Daniel Crosby, *Chairman*.

COMMITTEE ON MEDICAL DEFENSE

Executive Group

Henry Snure, Sr., Chairman, 1934
Fred R. DeLappe, 1933 George G. Reinle, 1935

To the President and the House of Delegates:

Prior to 1924 the California Medical Association furnished legal defense for all members of the Association, and from 1916 to 1923 offered an indemnity defense to any member who through special assessment desired this indemnity feature also.

Previous reports have explained in full the reasons for discontinuance of both the legal and the indemnity defense by the House of Delegates. They need not be retold in this report.

Following upon this decision of the House of Delegates, the Council permitted members who still wanted defense by the Association's legal counsel and their experienced confrères to secure such services in conjunction with those of the legal representative of the company in which such member carried commercial coverage.

This optional defense service is still available to members of the California Medical Association and

may be had by members who carry indemnity with any one of the commercial companies that operate in California, viz., Aetna Life Insurance Company, Hartford Accident and Indemnity Company, Medical Protective Company, New Amsterdam Casualty Company, and the United States Fidelity and Guaranty Company. This service is secured by joining the Medical Society of the State of California.

Claims and cases made or commenced by a patient against a member for alleged negligence are in full charge of the chairman and secretary of the society, acting as attorneys-in-fact for each member. The chairman and the secretary are further empowered by each of the members to apply such part of the dues as may be necessary in their discretion to meet attorney's fees and costs of defense in any such claim or case.

The only new feature in this connection to report for the year 1932-1933 is the "group coverage" offered by the United States Fidelity and Guaranty Company, which is available to members of the society.

Members of the Medical Society of the State of California continue to express and record in the office their appreciation of and satisfaction with the service rendered by this organization. Members who desire detailed information can write for information and rates to the Association secretary.

Respectfully submitted,
Henry Snure, *Chairman*.

COMMITTEE ON MEDICAL ECONOMICS

Executive Group

John H. Graves, Chairman, 1935
Daniel Crosby, 1933 Lyell C. Kinney, 1934

To the President and the House of Delegates:

The committee has not conducted any independent investigation this year in regard to the economic status of doctors of medicine because the attention of the society has been focused on constructive insurance plans. The members, however, have contacted several of the county medical societies, the Southwest Pediatrics Society, and the Western Hospital Association, presenting to them the progress that is being made in California toward the more adequate distribution of medical care.

The activities of the Committee on Medical Economics are so merged with the Public Relations Committee that a separate report is unnecessary.

Respectfully submitted,
John H. Graves, *Chairman*.

COMMITTEE ON MEDICAL EDUCATION AND MEDICAL INSTITUTIONS

Executive Group

George Dock, Chairman, 1935
George Hunter, 1933 H. A. L. Ryfkogel, 1934

To the President and the House of Delegates:

I think the Committee on Medical Education and Medical Institutions can only report that it has kept the problems on the subject in mind, but cannot at present make a formal report.

It might be well if the deans of medical schools were given an opportunity of communicating their ideas and problems to the State Association from time to time. I would suggest that a new organization of the committee be brought about at the next meeting to include such officers.

I wish to report that all the members of the committee at present appreciate the honor and responsibility of their duties.

Respectfully submitted,
George Dock, *Chairman*.

COMMITTEE ON MEMBERSHIP AND ORGANIZATION

Executive Group

Harry H. Wilson, Chairman, 1935
Jesse W. Barnes, 1933 LeRoy Brooks, 1934
The Secretary, ex officio

To the President and the House of Delegates:

An active, aggressive campaign for membership should be instituted in each county unit this year.

Common danger and need has shown the value of organization, and it should be brought to the attention of every member of the California Medical Association and to every doctor of medicine eligible to membership that he needs the Association much more than it needs him.

The dues are incidental. The value of the voluntary services—not purchasable—of the working members constitutes the real worth of membership.

The medical and hospital service plan of the Public Relations Committee has been the most valuable factor in attracting interest in the California Medical Association.

The Legislative Committee of the State Association, working through the local committees, with a well organized plan, has tremendously impressed the non-members who have been awake to the danger of vicious legislation and aware of the valuable part the local county units and the California Medical Association play in protecting the public and the medical profession.

After approval, details of the membership drive will be published later.

Respectfully submitted,

Harry H. Wilson, *Chairman*.

COMMITTEE ON PUBLICATIONS

Executive Group

Percy T. Magan, *Chairman*, 1934

Frederick F. Gundrum, 1933 Ruggles A. Cushman, 1935
The Editor, ex officio The Secretary, ex officio

To the President and the House of Delegates:

The chairman of your Committee on Publications has endeavored to keep in touch with the scope and make-up of the various publications provided for in the by-laws of the California Medical Association. These are four in number, viz., the official journal—*CALIFORNIA AND WESTERN MEDICINE*, the annual directory, the *Pre-Convention Bulletin*, and the annual convention program.

As noted by the editor of *CALIFORNIA AND WESTERN MEDICINE*, the decisions concerning what papers presented at an annual session shall be published in *CALIFORNIA AND WESTERN MEDICINE* are quite difficult to make. The policy of giving preference to papers of not too technical a nature and on subjects appealing to a large group of California Medical Association members is one which appeals to us as being sound. An inspection of official journals of other state medical associations at once indicates that *CALIFORNIA AND WESTERN MEDICINE* must be recognized as among the first half-dozen best of such state medical society publications. We are in genuine accord with the policy of the editor in placing such insistent emphasis on topics of general medical economic interest and on papers having a special bearing on California and Pacific Southwest problems.

In these days of economic distress, it is also pleasing to note that the editor was able to secure from the printer, who has brought out the official journal during the last twenty-eight years, a reduction in printing costs of about \$100 per month, as reported in the January 21 meeting of the Council.

The typographical form for the annual directory, which was devised by the editor to save printing costs, is also one which we feel is warranted in times such as the present.

The proposal to print the *Pre-Convention Bulletin* in the program number of the official journal in advance instead of after the annual session will no doubt be found to be an improvement.

In the annual convention program, the plan to give papers one general annual session numerical instead of separate section sequences, each starting with figure one, should make for easier reference.

In conclusion we would state our opinion, that the official journal should be maintained on the high standards of the past, because in the end it is the most tangible and material expression which many members who do not attend local or state society meetings receive in return for their State Association dues. It

is the contact medium between the State Association and its members.

We hope that the scientific studies and researches of California physicians will be of increasing value, and that the publication of such papers in the official journal will enhance its own reputation, as well as that of the California Medical Association.

Respectfully submitted,

Percy T. Magan, *Chairman*.

COMMITTEE ON PUBLIC POLICY AND LEGISLATION

Executive Group

Junius B. Harris, *Chairman*, 1935

Fred R. DeLappe, 1933 William Duffield, 1934

The President, ex officio The President-Elect, ex officio

To the President and the House of Delegates:

More than two hundred bills affecting the medical profession either directly or indirectly were introduced during the first half of the present legislative session. Since the opening of the second half of the session on February 28 several additional bills of interest to the profession have been introduced and a number of the skeleton bills have been filled in. However, at the present writing there are more than fifty of these skeleton bills still open and they may be filled in at any time with measures of vital concern.

During the legislative recess, meetings were held in San Francisco and Los Angeles with members of the Council, committeemen and allied groups at which your chairman brought to their attention some of the measures most vitally affecting medical practice and public health. At these meetings it was interesting to note that at least one member of the profession, and in many instances large committees, had studied bills assigned to them and were able to give very constructive suggestions. This basic work on the part of individual members of the Association has been exceedingly helpful to your representative in discussing legislation in Sacramento. Noteworthy is the activity and co-operation of the Public Health League of California and the League of Medical Voters.

At this writing, Senate Bill 953 by Senator Fellom, relating to organization and operation of hospital associations, has been tabled in committee. Senate Bill 674 by Senator Fellom ("antivivisection measure") was passed out of committee without recommendation and is on the floor of the Senate for vote. Senate Bill 160 by Senator Seawell, regulating hospital associations, has not yet been heard before the committee. Senate Bill 782 by Senator Mixter, permitting the reception of pay patients in county hospitals, is also still in committee. Assembly Bill 1306 by Mr. Dempster, establishing a State Board of Naturopathic Examiners, has been tabled in committee. Assembly Bill 1159 by Mr. Gilmore on the same subject has not been heard before the committee. Assembly Bill 795 by Mr. Craig, relating to x-ray technicians, is still resting in committee, as are Assembly Bill 900 by Mr. Rawls, permitting chiropractors to care for the injured under the Workmen's Compensation Act, and Assembly Bill 1740 by Mr. Maloney, requiring appointment of chiropractors in all institutions receiving financial assistance from the state. Assembly Bill 1277 by Mr. Neilson, for regulation of clinics, is now being amended to cover certain technicalities and will be argued before the committee at an early date.

One of the most outstanding features of the legislative session has been the tremendous interest and opposition to Assembly Bill 2190 by Mr. Bliss which would permit county supervisors to admit pay patients to county hospitals. The enormous tax burden that would result from such procedure brought a veritable flood of protests from taxpayers from all sections of the state. Mr. Bliss requested a conference of all interested parties to work out a compromise. This is now under way.

Above are only a few of the measures that require the constant attention of your members of the Legislative Committee. There are scores of additional bills that must be watched from day to day. There are Legislative Committee meetings morning, afternoon, and evening being held in the State Capitol, and it is

very essential that the committee procedure be carefully watched, as amendments are frequently introduced which vitally concern our profession.

Your chairman is impressed at this session of the legislature by the average high type of legislator selected by the voters to represent them at this session. Safeguarding the interests of public health are two outstanding lawmakers. The Honorable Dan E. Williams, chairman of the Senate Committee on Public Health and Quarantine, and the Honorable Melvyn E. Cronin, chairman of the Assembly Committee on Medical and Dental Laws.

Your chairman will make a complete report at the councilors and officers' luncheon at Del Monte on Tuesday, April 25, immediately following the general session.

Respectfully submitted,

Junius B. Harris, *Chairman*.

COMMITTEE ON SCIENTIFIC WORK

Executive Group

Emma W. Pope, *Chairman*

F. M. Pottenger, 1933 Lemuel P. Adams, 1934
J. Homer Woolsey, 1935
Fred H. Kruse, *ex officio*
E. Eric Larson, *ex officio*

To the President and the House of Delegates:

The Committee on Scientific Work has held two meetings—one a committee meeting alone, and one with the representative officers of each section present. By personal endeavor and correspondence, what we believe to be our finest scientific program has been evolved.

The committee, with the representative section officers, having in mind the subjects desired for presentation, have been able to select visiting speakers interested particularly in the subjects under discussion. A very representative group of invited guest speakers has been secured.

This year the scientific program embodies several symposia, which are so arranged as to bring to our membership the very latest and best on timely medical subjects. In addition, the program arrangement has been adjusted so as to best fit the needs of the majority in attendance at the respective sections.

A meeting has been scheduled of the newly elected section officers with the members of this Committee on Scientific Work for luncheon on Wednesday noon, at which time a start will be made on the scientific program for the annual session of 1934.

Respectfully submitted,

Emma W. Pope, *Chairman*.

REPORTS OF COMMISSIONS, SPECIAL AND COUNCIL COMMITTEES

COMMITTEE ON PUBLIC RELATIONS

Charles A. Dukes, *Chairman*, Cancer Commission.
Fred B. Clarke, *Chairman*, Committee on Health and Public Instruction.
Daniel Crosby, *Chairman*, Committee on Industrial Practice.
Junius B. Harris, *Chairman*, Committee on Public Policy and Legislation.
John C. Ruddock, *Chairman*, Committee on Hospitals, Dispensaries and Clinics.
Harry H. Wilson, *Chairman*, Committee on Membership and Organization.
John H. Graves, *Chairman*, Committee on Medical Economics.
Joseph M. King, *ex officio*, President of California Medical Association.
George G. Reinle, *ex officio*, President-Elect.
Emma W. Pope, *Secretary*.
Hartley F. Peart, *Attorney*, Legal Counsel, California Medical Association.
Walter M. Dickie, *Director*, Department of Public Relations.

To the President and the House of Delegates:

The Committee on Public Relations of the California Medical Association has held nine meetings during the past year—four in Los Angeles, and five in the offices of the Association in San Francisco. Dr. John Graves served as chairman of the committee

until the meeting of September 24, 1932, at which time he submitted his resignation, and Dr. Charles A. Dukes was elected to succeed Doctor Graves as chairman.

The committee's program for the past year has been confined principally to the following major activities:

(1) The economic study of medical service plans and the formation of a plan which would be suitable for component county medical societies which desire to institute a plan for medical care on a periodic payment basis.

(2) The study and formation of necessary legislation for the standardization of clinics and dispensaries.

(3) The guidance of and assistance to component county societies of the state which are interested in the establishment of a medical service plan.

(4) A survey of county hospitals, with special reference to pay and part-pay patients.

(5) Instruction in medical economics through the medium of publications, addresses by committee members to the various county medical societies and other interested groups, fair exhibits, etc.

Taking these up in detail,

(1) The committee has formulated certain underlying principles which it feels should be incorporated in any plan medical service instituted by a county medical society or group thereof which the committee should be called upon to endorse. Four types of service, including medical service, medical and surgical service, hospital care, singly or combined, have also been outlined by the committee.

A special committee, consisting of Doctors Wilson and Dickie and Mr. Peart, was appointed and instructed to prepare the necessary legal forms for the institution of a medical service plan suitable to each particular type of service. The principles, plans of organization, and types of service were submitted to the Council with recommendation of the committee, and were adopted on September 24, 1932, with slight revision and the adoption of an additional principle.

The detailed plan for medical and hospital service, with the principles and forms embodied therein, was published in a bulletin issued by the committee and sent to the membership of the Association in February of this year.

(2) The chairman of the Committee on Hospitals, Dispensaries, and Clinics submitted to the committee a report on the proper legislative program for the control of clinics, with the idea of introducing a bill into the legislature. This report was turned over to the Association's legal counsel to be drafted into a legislative bill, and the same was introduced in the first half of the legislative session by Assemblyman Neilson as Assembly Bill 1277.

(3) In coöperation with the Committee on Public Relations, and through their own efforts, several component county medical societies or groups thereof have formulated and adopted or otherwise shown interest in medical and/or hospital service plans. Alameda County Medical Society has placed in operation a medical and hospital service plan, an account of which was published in the committee bulletin under date of February 15, 1933. San Diego County Medical Society has established a Central Clinic Service, based on the committee's plan, and is further considering the adoption of hospital insurance. A report of the Clinic Service for persons of moderate means was published in the February issue of CALIFORNIA AND WESTERN MEDICINE under the section devoted to the Department of Public Relations.

(4) In making a study of county hospitals the committee finds that the public institutions of the state are at this time hospitalizing 52 per cent of the population and that in many counties the percentage runs as high as from 85 to 90 per cent. This may be due in part to the present economic conditions; however, the committee finds a decided trend toward the utilization of county hospitals for pay patients, which they believe to be a wrong and unnecessary burden upon the taxpayer, as well as the medical profession.

(5) The committee has endeavored to keep the members of the Association and others interested in

medical economics informed as to its activities through various communications and bulletins issued to the membership from time to time; and a general discussion of medical economics has appeared in each issue of the Association's journal, CALIFORNIA AND WESTERN MEDICINE.

Educational exhibits were installed at the State Fair in Sacramento and the Los Angeles County Fair in Pomona.

The chairman, the director of the Department of Public Relations, and the individual members of the committee have visited many of the component county medical societies upon request, and have presented the various plans of the committee and advised concerning the medical economics problems of each particular community. In visiting the societies the committee members have not only done so cheerfully, but at their own time and expense.

If the Committee on Public Relations has made no other contribution, it has at least stimulated the study of medical economics in the ranks of the profession; and in the establishment of public relations committees in many of the county medical societies of the state, has placed these societies in a much better position to recognize and meet their own particular problems.

Respectfully submitted,
Charles A. Dukes, *Chairman*.

CANCER COMMISSION

Executive Group

Charles A. Dukes, Chairman
Lyell C. Kinney, Vice-Chairman
Alson R. Kilgore, Secretary

Harold Brunn
Henry J. Ullmann
Clarence G. Toland

William Ophüls
Orville Meland
A. Herman Zeiler

To the President and the House of Delegates:

The first major program of the Cancer Commission has been carried well forward toward completion during the year. Studies by subcommittees have been completed on gynecologic tumors, breast tumors, genito-urinary tumors, the general radiology report, eye, ear, nose and throat tumors, and have appeared in CALIFORNIA AND WESTERN MEDICINE. Others are in preparation and the list will be completed by late summer or early fall.

These studies appear to be of greater educational value than had been anticipated. The process of their preparation by committee and conference work has resulted in a diffusion of ideas and experience among members in various specialties which could have been accomplished in no other way.

They have also brought sharply to attention that on many fundamental points in the handling of cancer there are still irreconcilable differences of opinion. Some of these have been made the subject of research to the extent of ascertaining by correspondence the present practice of the important cancer centers of the world, thus bringing to the profession a digest of world experience not obtainable in medical literature.

Upon completion of the series, publication in collected reprint form is planned so that every member of the California Medical Association may have them for reference.

Incidentally, this method of approach has attracted wide and favorable attention outside California.

In addition to this study work, meetings of fourteen county and joint county societies, as well as the Nevada and New Mexico State Medical Associations, have been addressed by representatives of the Commission, and a full day of x-ray and pathologic conferences has been arranged for Sunday, April 23, in connection with the Del Monte meeting of the California Medical Association.

The Commission's next major program is to encourage the establishment of cancer clinics at appropriate centers in the state. This will be carried out directly through the local county societies involved. It is expected that the next year will be largely occupied with this work.

A condensed statement of expenditures for the year to date follows.

January 1 to December 31, 1932

Budget allowance by Council		\$4,500.00
Rent	\$ 450.00	
Salary	1,080.00	
Miscellaneous supplies	437.95	
Transportation	204.13	
		\$2,172.08
Appropriation unused		\$2,327.92

Respectfully submitted,
C. A. Dukes, *Chairman*.

AUDITING COMMITTEE

Executive Group

T. Henshaw Kelly, Chairman
Morton R. Gibbons
Karl L. Schaupp

To the President and the House of Delegates:

The Auditing Committee has scrutinized all the expenditures of the Association during the year 1932 and has approved, as set forth in the Constitution and By-Laws, all expenditures that were properly authorized.

The books of the Association have been audited and found correct by Hugh Ross, certified public accountant.

In consideration of the fact that a committee has been appointed by the Council to resurvey the expenditures of the Association and that that committee's report will be acted upon by the Council, the Auditing Committee feels that it need not burden the House of Delegates with any more extensive report.

It wishes to commend the secretary-treasurer and her assistants for the careful and accurate accounts that have been kept.

Respectfully submitted,
T. Henshaw Kelly, *Chairman*.

COMMITTEE ON ANNUAL SESSION ARRANGEMENTS

Executive Group

William Gratiot, Chairman
Spencer Hoyt
John A. Merrill
Alfred L. Phillips
T. Henshaw Kelly

To the President and the House of Delegates:

Because of present economic conditions no special entertainment other than that given following the president's dinner has been provided by the Association. Members will no doubt arrange their own parties and trips to fit in with joint convenience.

Del Monte affords many amusements to occupy the spare moments of the convention. Golf, tennis, swimming, fishing, scenic drives, and other entertainment may be arranged at any time.

Dr. Harry Alderson is golf chairman, and has made arrangements for members to participate in the golf tournament of the Northern California Golf Association on Saturday, April 22, and Sunday, April 23, preceding the annual session.

Busses and cars will be furnished for the drives upon application. Notice of moving pictures and other entertainment will be given at the time of the convention.

The entertainment for the president's dinner will be simpler than previous years, but we hope will meet the approval of those present.

Respectfully submitted,
William Gratiot, *Chairman*.

SPECIAL COMMITTEE ON CLINICAL AND RESEARCH PRIZES

Executive Group

George Dock, Chairman
Eugene S. Kilgore
Arthur L. Bloomfield

To the President and the House of Delegates:

Eight papers have been submitted this year in the prize contest and are being studied by the members of the committee. A final report with recommendations for the awards will be submitted to the Council at the annual meeting, and announcement of the winners of the prizes will be made at the meeting of the House of Delegates.

The quality of the manuscripts submitted this year is very good, and the committee feels that the State Association will do well to continue the prizes.

Respectfully submitted,
George Dock, *Chairman*.

C. M. A. DEPARTMENT OF PUBLIC RELATIONS

An open forum for progress notes on the department's activities, and for brief discussions on medical economics. Correspondence and suggestions invited. Address Walter M. Dickie, Room 2039, Four Fifty Sutter Street, San Francisco. This column is conducted by the Director of the Department.

The Battle Creek Plan for Medical Care of the Indigent—The Academy of Medicine and Dentistry*

For more years than we like to remember, the subject of the care of the indigent has been a bone of contention between the doctors and county poor commissioners and other relief agencies. Since the state or the next government unit, the county, city or township, is responsible by law for medical care as well as material relief for its indigent citizens, the problem of furnishing adequate medical service should offer no serious difficulty, provided there is willingness on the part of both parties to get together on a humanitarian basis and in the spirit of coöperation. Without the benefit of a well worked out plan or system, medical relief often becomes the pawn of those political departments of government assigned to relief work. These agencies could not be expected to impartially rotate the service among all the doctors, although, as tax-paying citizens, they contribute their share of public funds for relief purposes.

The age old traditions and ethics of the medical profession are not easily adaptable to any sort of bargaining. Only in the case of sickness among those unable to pay, will doctors consider the subject of contract practice. During the last year, 1932, in Calhoun County with a population of 85,000, the plan of hiring a full time physician to care for the indigent cases was tried out and the medical care of county cases was turned over to a doctor imported for that purpose. On account of the volume of work, no matter how well trained the doctor, it would be impossible for him to fulfill all the requirements and demands made upon him to cover all the specialties of the present day practice.

It was soon discovered that he could not, in addition to being an internist, fill the shoes of surgeon, an orthopedist, an obstetrician, a pediatrician, an eye, ear, nose and throat specialist, etc. As a result, the economy of hiring a one man county doctor did not meet expectations, for the county had also to pay for help from various specialists employed to meet the needs of the occasion. The total cost of furnishing care to the worthy indigents was, in the aggregate, just as much as it had been in other years. With a strange doctor, many of the poor people refused to submit themselves to his care largely through lack of confidence. They wanted their own doctor and in many cases got him and received the usual care at his hands, but with no hope of rendering pay to him for his services.

THE UNIT SYSTEM

Under the old system each county acted through its supervisors and its poor commissioners as the relief agency to furnish material relief and medical care to the indigent residents of the county. With the passage of the new law the indigent relief has become a problem for each city and township. Confronted with this situation the city of Battle Creek was open to suggestions as to the most effective method of caring for the indigent sick.

Accordingly a meeting of Battle Creek physicians and dentists was called, November 10, 1932, which resulted in the formation of the Battle Creek Academy of Medicine and Dentistry, a nonprofit nondividend corporation. Their first undertaking was to obtain the

facts as to the number of cases treated in other years, and the aggregate costs to the county for their medical care. These figures, through the free coöperation of county officials, were made available and were taken as a basis for an estimate for future service. Based upon these findings, a contract was made with the city to furnish medical care, with ordinary medicine and including surgery, to the indigent sick in Battle Creek for the year 1933, for the sum of \$12,000, payable in semi-monthly installments of \$500.

The next vital question to settle was the problem of determining the economic status and worthiness of the families requiring attention.

SOCIAL WORKER

The Academy of Medicine and Dentistry has its own investigating committee, who, with an experienced social worker and former county nurse, whom they employ at their own expense, together with the city appointed director of relief, served the interests of both doctors and the city by investigating the worthiness of each case. The plan of action is carried out as follows:

Each member of the academy who has an office or house call from a family or individual who appears to be unable to pay for service, or who already is receiving fuel, food or rent from the city, would at once render first aid with no questions as to forthcoming pay. He at once makes his report, on a special notification card, to the academy headquarters, and the visiting nurse, together with the relief director employed by the city, investigate and, if found worthy, the doctor continues to give medical care until the patient recovers. If unworthy, the doctor would treat the patient as any other private patient. At the end of the month he sends an itemized statement to the Auditing Committee of the academy. This bill for service is rendered at the usual prices for such service in this city. The Auditing Committee discounts the bill 50 per cent and then at once pays the doctor half of the discounted bill, or 25 per cent of the original bill. The rest of the account remains unpaid until the end of the year, when any remaining funds available would be prorated up to the amount of the unpaid balance of each doctor's bill. The expense of hospitalization, special orthopedic appliances, insulin vaccines and a few other specials are not included in this plan, but are specially provided for by the city.

AIMS

The Academy of Medicine and Dental Service is devised to fulfill definite objectives and ideals; among them are the following:

1. To preserve to the private practice of medicine and dentistry its individualism, its incentive to scientific excellence, its reward for that excellence, the free choice of doctor or dentist to remain with the patient, and to see that the emoluments for service are equitably distributed.
2. To provide the sick poor in the present emergency with the same quality of service and tender care as can be had upon the usual fee-for-service basis.
3. To encourage the free use of consultation service in special or obscure cases.
4. To return the practice of medicine and dentistry to the local doctors and dentists, where it rightfully belongs.
5. To forestall or replace various systems of medical care established for profit through lay or contract practice.

* Reprinted from the *Journal of the Michigan State Medical Society*, March, 1933.

6. To provide a means whereby temporarily financially embarrassed sick people may call upon their own family doctor without being humiliated.

7. To promote disease prevention by the process of public education, and by the exchange of ideas upon the latest scientific methods of treatment.

8. To restore the confidence of the patient in the high ideals and purposes of organized medicine.

9. To endeavor to prevent financial embarrassment of large numbers of citizens from developing into chronic pauperism.

The Academy of Medicine and Dentistry is the result of an effort on the part of the medical and dental professions of Battle Creek to extend to the limit their professional cooperation in the present emergency. It is also an effort to forestall state medicine by answering the question as to whether or not these professions can submerge their own interests in behalf of the health of the indigent public.

While the academy is now in actual operation, it is yet too soon to say how perfectly it will function. It doubtless has many weaknesses, but it is expected that these will be corrected as soon as they appear. The number of cases passed by the investigating committee for medical care during its first month of existence suggests that a huge epidemic is raging. However, this apparent rush of business is explainable on the ground that all those registering at the city welfare headquarters are given carte blanche service by the academy members in case of sickness. After a few months, or possibly not until the end of the year, will it be possible to pass judgment on how well it fulfills its mission. Careful records of cases by the social worker, and systematic accounting of its funds are being kept by an expert accountant and, as the experiment unfolds, one may hope for a wealth of facts upon which to guide in other experiments of this kind.

Battle Creek is a city of 50,000 population, and has forty-five physicians and twenty-seven dentists in active practice, who are members of the academy.

*The Place of Local Government in Public Health Organization**.—Facilities, adequate perhaps for the application of knowledge in former eras, break down in the effort of applying modern knowledge. Shall we continually blind ourselves to the need for better methods of public health administration methods specific in character, and by our wilful blindness continue to deprive the people, for whose welfare we are responsible, of protective service which may be made readily available?

Necessarily the work of any health organization is highly technical in character. It follows that in this highly specialized field the service of specialists is essential to the effective development of specific services as related to specific problems. The day of the "shot-gun" measure for a public health problem is past, as certainly as the day of the "shot-gun" prescription in the practice of medicine.

In developing any public health organization, in all fairness to appropriating bodies and to the public for which appropriations are made, we must constantly have in mind the rendition of a maximum service for a minimum cost, and this is possible only through the utilization of qualified personnel especially trained for this very technical field.

The federal government may properly be concerned with protection from exotic diseases, with the interstate spread of disease, and cooperate with the states through consultation service, actual aid by the assignment of specially trained personnel, and in other ways assist state organizations. It may profitably engage in major research either in the causes and conditions of disease and health or in administrative procedures.

The state may exercise its inherent police power through the promulgation and enforcement of public

health regulations, may perform for reasons of business efficiency a few direct services, such as the registration of vital statistics, may aid local governments in the formation of local health services, may supply expert consultant service, may engage in research, particularly that type of primary intrastate interest, and may perform many other functions; yet the state cannot administer the health functions of a local government as effectively as can the local government in cooperation with the state.

The local government is that element closest and most responsive to local conditions and local needs. It is, therefore, the unit best fitted to render the direct and immediate community service that is the very foundation of any public health program. Upon it falls the responsibility of preventing rather than controlling epidemics, of creating conditions which interpose permanent barriers in the way of disease; of health education that truly leads out of misunderstanding to knowledge of principles which elevate health standards; of constantly standing guard that disaster may not even threaten; and of being the "family physician" to the health of the community. Indeed it must be plain to any student of public health administration in this country that the personnel of local health departments are the general practitioners of public health and that state and federal organization must, in many respects, serve essentially the same purpose as the consultant in the medical field.

If we grant the soundness of these simple principles, it immediately follows that local health work must be put upon a whole-time basis; otherwise there is no incentive to special qualification.

The history of full-time local health work in both the urban and rural fields amply supports the conviction that maximum efficiency is reached only through organization on such a basis with a sufficiently large supporting population and taxing unit of government to provide at least the primary units for a balanced organization. The evidence also supports the conclusion that the county is usually the smallest unit of government in rural areas that will meet the requirements as to size of population and taxable resources.—*Health News*.

Birth Control.—Though the birth control movement has encountered much ecclesiastical opposition, it has received support in influential social and medical circles. The annual report of the Society for the Provision of Birth Control Clinics shows that there are now sixteen affiliated centers throughout the country and during its ten years' work advice has been given to 38,000 persons. It is claimed that in this time of unemployment the need for the centers is greater than ever and that letters received from women who live in areas remote from the clinics show the necessity for widespread extension of clinics and for the training of medical students in contraceptive measures, which few now receive. The society is doing its best to train as many students and physicians as possible.

The report of the medical officers of the clinics states that notwithstanding the holding of the International Birth Control Conference at Zurich in 1930, they found no grounds for changing the methods followed at the clinics for seven years, which are substantially the same as those of Mrs. Margaret Sanger's clinic in New York. The ideal contraceptive has not yet been discovered.—*London News Letter*.

Digestive Leukocytosis.—Garrey and Butler are of the opinion that the low basal leukocyte count of the resting state is unaffected by the intake of large quantities of either protein or carbohydrate. Sudden distention of the human stomach, or abrupt changes in gastric temperature, due to hot or cold fluids, cause an immediate but mild and transient rise in the leukocyte count. Animal experiments indicate that these reactions are due solely to reflex vascular disturbances, but have no relation to the absorption of digest. All experiments indicate that there is no digestive leukocytosis in normal adults.—*American Journal of Physiology*.

*Abstract of an address by E. L. Bishop, M. D., State Commissioner of Health of Tennessee, read at the Annual Conference of Health Officers and Public Health Nurses at Saratoga Springs, Wednesday, June 29, 1932. To appear in full in the New York State Journal of Medicine.

CANCER COMMISSION OF THE C. M. A.

The Cancer Commission was brought into being by the House of Delegates of the California Medical Association to aid in the furtherance of all efforts to combat cancer. The roster of officers and the central office of the Commission to which communications may be sent is printed in this issue of California and Western Medicine (see front cover directory). This column is conducted by the Secretaries of the Commission.

CANCER COMMISSION PROGRAM*

Del Monte Annual Session

April 23 to 27

In connection with the California Medical Association 1933 annual session, the Cancer Commission will hold a day of demonstrations on Sunday, April 23, from 10 a. m. to 5 p. m., at the Hotel Del Monte. A notice of the meeting rooms will be posted in the hotel lobby.

Microscopic Pathology Conference

Following the plan of the successful Microscopic Pathology Conference held at Los Angeles in connection with the 1932 California Medical Association annual session, a similar conference is planned this year. Members in attendance will be given opportunity to study and make diagnoses on microscopic slides of cases presented. The program will include a different group of tumors from that presented last year; and in order to make the conference more interesting, both for pathologists of experience and for surgeons and others in clinical fields who are "amateur" pathologists, not only will typical specimens of certain groups of tumors be included, but a number of unusual cases in unrelated fields will be presented for diagnostic interest.

The sequence of demonstrations is as follows:

MORNING

- 10:00-11:00 a. m.—Connective Tissue Tumors, George D. Maner.
11:00-11:20 a. m.—Case, Edwin I. Bartlett.
11:20-12:20 p. m.—Endothelioma, David A. Wood.
12:20-12:40 p. m.—Case, A. M. Moody.
12:40-1:00 p. m.—Case, G. Y. Rusk.

AFTERNOON

- 2:00-2:40 p. m.—Stomach Cases, C. E. Nixon.
2:40-3:00 p. m.—Case, Frederick Proescher.
3:00-3:40 p. m.—Colon Cases, James B. McNaught.
3:40-4:00 p. m.—Case, Robert A. Glenn.
4:00-5:00 p. m.—Kidney Cases, E. H. Ruediger, H. A. Ball.

Microscopes.—Inasmuch as the conference will be held at Del Monte instead of at a teaching laboratory, it will be necessary to ask each member in attendance to bring his own microscope. In order to allow space for microscope work, it will be necessary to limit the number in attendance.

Registration.—The members desiring to attend should register promptly with the secretary of the Cancer Commission, A. R. Kilgore, or the chairman of the Extension Committee, Z. E. Bolin, 450 Sutter Street, San Francisco. It is requested that members do not reserve places unless they can be present at both morning and afternoon sessions. The program will be a full one and it will be necessary to start promptly at 10 a. m.

Radiology Diagnostic Conference

A demonstration in radiologic diagnosis along similar lines is also planned. Case histories will be briefly

* In the official Del Monte program the Cancer Commission program will be found listed in the Section Index. In California and Western Medicine this program is printed in lieu of report copy.

presented, roentgen-ray films will be then placed in view boxes distributed conveniently about the room and time for study of the films by each member allowed. After members have had opportunity to make their own diagnoses from the films, the case and its radiological features will be discussed by the demonstrator. Each case is expected to occupy about twenty minutes and as the program is a full one, it will be necessary to begin promptly at 10 o'clock.

Registration.—In order to avoid crowding and give opportunity for all in attendance to have ready access to films to be studied, it will be necessary to limit the number in attendance. Members desiring to be present should register promptly with the secretary of the Cancer Commission, A. R. Kilgore, 450 Sutter Street, San Francisco, or with the chairman of the committee in charge of the demonstration, I. S. Ingber, 490 Post Street, San Francisco.

The sequence of roentgen-ray demonstrations follows:

MORNING

- 10:00-11:00 a. m.—Stomach Cases, Milton J. Geyman.
11:00-12:00 noon—Colon Cases, L. H. Garland, A. C. Siefert.

AFTERNOON

- 2:00-3:00 p. m.—Chest Cases, R. G. Taylor, Frank S. Dolley.
3:00-3:40 p. m.—Brain Cases, R. S. Stone, O. W. Jones, Jr.
3:40-5:00 p. m.—Bone Cases, L. C. Kinney, I. S. Ingber, Henry Snure, R. R. Newell.

Sunday Evening Public Meeting

On Sunday evening, April 23, at 8 p. m., at the Hotel Del Monte a meeting to which the public as well as members of the medical profession are invited will be sponsored jointly by the Woman's Auxiliary to the California Medical Association and the Cancer Commission. The program planned is as follows:

Arresting Cancer. A report of results obtained by co-operative attack at the Highland Hospital. Lantern slide presentation of cases.—C. A. Dukes, chairman of the Cancer Commission.

The Commission's Survey of Cancer Diagnosis and Treatment.—A. R. Kilgore, secretary of the Cancer Commission.

Program of the Cancer Commission for the Establishment of Special Cancer Services in California.—Lyell C. Kinney, vice-chairman of the Cancer Commission.

Cancer Features in Section Programs

In addition to the above programs, attention is directed to the following cancer features during the regular convention program.

Monday, April 24, 2 to 5 p. m.—Symposium on the radiologic treatment of cancer, at the first meeting of the Radiology Section.

Paper on cervical cancer, Obstetrics and Gynecology Section.

Paper on manifestation of arsenic poisoning, Dermatology and Syphilology Section.

Tuesday, April 25, 8:30 to 11:30 a. m.—Symposium on lesions of the colon, at a joint meeting of the Radiology and General Surgery Sections.

Paper on tumors of the testis, Urology Section.

Paper on skin lesions in association with agranulocytosis, Dermatology and Syphilology Section.

Wednesday, April 26, 8:30 to 11:30 a. m.—Paper on cancer of the stomach, at the meeting of the General Surgery Section.

Paper on anemia of gastric cancer, joint meeting of General Medicine and Pathology and Bacteriology Sections.

Thursday, April 27, 8:30 to 11:30 a. m.—Paper on retinal glioma treated by radium therapy, at the Eye, Ear, Nose and Throat Section.

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Cancer Commission Committee Meetings

On Tuesday afternoon, April 25, at 2 p. m., meetings for final discussion of the reports of the Committees on Chest Tumors and Skin and Mouth Tumors will be held at the Hotel Del Monte—Chest Tumors in the Bali Room, and Skin and Mouth Tumors in the Tower Room. Members interested in the discussions will be welcomed.

A meeting of the Pathology Committee will be held on Tuesday at 2 p. m. in Children's Play Room No. 1.

Members of the Cancer Commission will hold an executive meeting on Wednesday, April 26, at 2 p. m. in the Tower Room.

Sensitization and Roentgen Rays.—Recent statements regarding the combination of isamine blue and of erythrosin with roentgen therapy have aroused renewed interest in such combination treatment. The idea of using dyes is based upon the observation made many years ago that certain coloring matters extended the range of sensitivity of a photographic plate and this in turn led to analogous studies on living matter. It was found, by the use of certain very dilute aqueous solutions of fluorescing dyes that paramecia could be rendered more sensitive to visible light. While a rough analogy may be assumed between the sensitizing of silver bromid by erythrosin and the sensitizing of protozoa by the same substance, it was shown by Tappener and others, about 1900, that the analogy was not very close for, in addition to the sensitization to light, the dyes also produced a certain amount of damage, even if the protozoa employed were never exposed to light. In other words, the sensitization is accompanied by a slightly lethal effect. The effects, therefore, observed after exposure to light were not wholly physical, but partly toxic.

Over thirty years ago attempts were made to increase the therapeutic action of x-rays by injecting into or painting the surface of tumors with various fluorescent dyes, such as eosin and its related compounds. Quinin, which also fluoresces, was injected into the tissues. Experiments were also carried out with protozoa, which, after suitable exposure to the dye or other substances, were exposed to roentgen or radium rays, without demonstrable effect. The upshot of all this experimentation was that the use of fluorescent substances did not increase the effectiveness of radiation of short wave lengths.

With the discovery by Barkla, about 1907, of the secondary characteristic rays produced by the exposure of metallic materials in the path of a beam of radiation, it was natural to test the effect of the introduction of salts or colloids of the heavier metals in increasing the biological action of radiation. Barkla himself made this attempt, and in 1911 Hernaman Johnson administered finely divided silver. In other cases solutions of silver nitrate were injected. He thought he could detect some beneficial results. Other students employed colloidal silver and ammonium and strontium bromid injected into tumors. Miller injected colloidal iridium, vanadium, and cobalt into tumors, and then rayed them, but the results of all of this experimental work were not striking. The injection of

thorium nitrate gave some results, but evidently due to the toxicity of the material, and not to the secondary radiation.

From the theoretical standpoint it appears that the presence of a moderate number of fine metallic particles distributed throughout the tumor should have but little effect. The range of the ionizing electrons in the tissues is very small, only the thickness of a few cells, so that the radiating particles must be evenly distributed to give a homogeneous action. Mayneord has estimated that at least one milligram of metal per cubic centimeter must be present to have any effect, and such concentration is practically impossible to obtain. A practical experiment on this side of the question has been carried on by Wood, who showed that colloidal gold injected in large quantities into animals did not decrease the quantity of x-ray necessary to destroy the cells of a tumor. With maximum permissible quantities of colloidal lead, on the other hand, a slight diminution, amounting to about 10 per cent of the necessary radiation dose, was noted. Wood explains this observation by the combined toxic and radiation effect, and not as a result of secondary scattering. It is probable, therefore, that any results which have been obtained clinically, either by sensitizing the tissues with dyes, or by injecting into them particles of heavy metal to act as radiators, are due not to any increase in the effectiveness of the x-ray, but rather to a combination of the lethal effect of the dye or the heavy metal with the lethal effect of the radiation.—Abstracted from editorial, *American Journal of Cancer*, Vol. 16, pp. 923-926, 1932.

The Production of Artificial Immunity to Cancer.—The results of a series of experiments on immunity to transplanted tumors in mice indicate that the produced immunity against tumors does not confer immunity against all tumors, but only against the particular tumor which is the subject of the experiment.

Further experiments have been carried out to test the effect of hereditary characters in producing immunity, or otherwise, in mice to tar warts. It was found that by interbreeding mice which tend to develop tar warts early, a stock can be obtained that develop warts much earlier than the ordinary stock-bred mice.—Ninth Annual Report, British Empire Cancer Campaign, 1932.

Standards of Treatment.—The prestige of the cancer specializing institute is due probably in large part to its physical equipment, but its actual superiority rests in its more active interest in the general tumor problem as well as the greater care with which pathologic material and clinical records are handled. The relative deficiencies of the smaller clinic appear from our study to be chiefly those of the occasional clinical or pathological error in diagnosis due to a lack of complete attention to the tumor problem and, above all, to the absence of a systematized plan of therapy, which permits some cases to be undertreated. The mere consciousness of the defects, however, should result to a large degree in their elimination.—Taylor, H. C., Jr., *American Journal of Cancer*, Volume 15, 1931, page 2559.

Tobacco Smoking as a Cause of Cancer.—Certain tars have been extracted from tobacco during its consumption in wooden and clay pipes in conditions resembling as closely as possible those met with in ordinary smoking. The yield of tar varied with the kind of tobacco used. Quantities of from five to fifteen grains were obtained from the combustion of a pound of tobacco. The tars were distilled and, after being rendered nontoxic, were applied to mice in alcoholic solution. Out of a large number of mice so treated only one developed cancer. It is probable that this isolated case was unconnected with tobacco-tar; the conclusion is justified that tobacco smoking plays little or no direct part in the production of cancer.—Ninth Annual Report, British Empire Cancer Campaign, 1932.

STATE MEDICAL ASSOCIATIONS

This department contains official notices, reports of county society proceedings and other information having to do with the state associations and their component county societies. The copy for the department is edited by the state association secretaries, to whom communications for this department should be sent. Rosters of state association officers and committees and of component county societies and affiliated organizations, are printed in the directories noted under Miscellany, on the front cover index.

CALIFORNIA MEDICAL ASSOCIATION

JOSEPH M. KING.....President
GEORGE G. REINLE.....President-Elect
EMMA W. POPE.....Secretary-Treasurer

OFFICIAL NOTICES

Hotel Rates at Annual Session*

HOTEL DEL MONTE, CONVENTION HEADQUARTERS

Rates for Annual Session, April 24-27, 1933

Only American Plan rates are quoted by the Hotel Del Monte. The rates published in the March issue of CALIFORNIA AND WESTERN MEDICINE have been revised and the following have since been quoted:

Main Building and Cottages:

Single room with bath (one person), \$9 per day.
Double room with bath (two persons), \$8 each person per day.
Sitting room, \$6.

Both Wings:

Single room without bath (one person), \$7 per day.
Double room without bath (two persons), \$6.50 each person per day.
Single room with bath (one person), \$8 per day.
Double room with bath (two persons), \$7 each person per day.
Two single rooms with bath between (two persons), \$7.50 each person per day.
Two double rooms with bath between (four persons), \$6.50 each person per day.

* * *

Next Council Meeting.—The date of the next meeting of the Council has been set for Sunday, April 23, at 8 p. m., in Room 723 at Hotel Del Monte.

COUNCIL MINUTES

Minutes of the Two Hundred and Twelfth Meeting of the Council of the California Medical Association at San Francisco January 21, 1933

The following minutes were approved by the Council at its two hundred and thirteenth meeting, held at San Francisco, on March 4, 1933.

Held in the office of the Association, Room 2004, 450 Sutter Building, San Francisco, Saturday, January 21, 1933, at 9:30 a. m.

Present.—Doctors Joseph M. King, president; George G. Reinle, president-elect; O. D. Hamlin, chairman of the Council; Edward M. Pallette, speaker; Councilors W. W. Roblee, William Duffield, H. J. Ullmann, F. R. DeLappe, A. L. Phillips, K. L. Schaupp, H. S. Rogers, R. A. Peers, G. G. Hunter, H. E. Zaiser, W. H. Kiger, M. R. Gibbons, T. H. Kelly; George H. Kress, editor; Emma W. Pope, secretary; Charles A. Dukes, chairman of the Committee on Public Relations; Walter M. Dickie, director of the Department of Public Relations, and Hartley F. Peart, general counsel. (Doctors J. H. Shephard, Joseph Catton and Rodney Yoell were present by invitation during discussion of certain subjects.)

* Editor's Note.—For additional information concerning other hotels and rates, see page 286.

Absent.—Dr. J. B. Harris, councilor.

1. Call to Order.—The meeting was called to order by the chairman, O. D. Hamlin. Doctor Hamlin stated that requests to appear before the Council had been received from Doctor Shephard to discuss the medical service plan, Doctor Yoell to discuss a proposed hospital association bill, and Doctor Catton to discuss the proposed changes in the commitment laws.

Action by the Council.—On motion of King, seconded by Kiger, and unanimously carried, the following resolution was adopted:

Resolved, That the time granted to each speaker be limited to fifteen minutes.

2. Budget for 1934-1935.—Doctor Kelly, chairman of the Auditing Committee, submitted the budget for the year 1934-1935 as prepared by the Auditing Committee and approved by the Executive Committee.

Action by the Council.—After discussion, on motion of Pallette, seconded by Reinle, and unanimously carried, the following resolution was adopted:

Resolved, That the budget for the year 1934-1935 as submitted by the Executive Committee, be approved.

3. Financial Statement.—Financial statement for the month of November, 1932, was presented by the secretary and approved as follows:

NOVEMBER, 1932	
Total receipts for November.....	\$ 3,698.03
Total expenses for November.....	5,098.90
*Loss for November.....	\$ 1,400.87
Gain for ten months.....	348.04
Total loss for 1932.....	\$ 1,052.83
Cash on hand, January 31, 1932.....	\$32,791.28
Cash on hand, Revolving Fund.....	1,000.00
Cash on hand, petty cash.....	50.00
Cash on hand, Salary Fund.....	1,300.00
	\$35,141.28
Total cash on hand, November 30, 1932.....	\$34,088.45

4. Balance Sheet for December, 1932.—The chairman of the Auditing Committee submitted the balance sheet for December, 1932, giving the assets and liabilities of the California Medical Association. Full discussion was had of the items included in the statement.

Action by the Council.—On motion of Schaupp, seconded by Peers, and unanimously carried, the following resolution was adopted:

Resolved, That the balance sheet for December, 1932, be approved as submitted.

5. Recess of Council.—On motion of King, seconded by Reinle, and unanimously carried, the following resolution was adopted:

Resolved, That a recess of the Council be called to permit a meeting of the "Trustees Of The California Medical Association."

6. Call to Order.—At the expiration of the recess, the meeting was called to order by the chairman.

7. Fiscal Year.—Discussion was had of a change in the fiscal year of the California Medical Association as recommended in Minute No. 3 of the one hundred and thirty-fifth meeting of the Executive Committee. The secretary stated that the auditor had advised that it would be impossible to set the fiscal year as July 1 to June 30 on account of the impossibility of having

* The apparent increase of expenses over receipts from April to December is occasioned by the fact that the major portion of dues is received during the first three months of the year.

an audit for submission to the House of Delegates in the event the fiscal year was so set. The secretary stated that such date could be set as the "budget year."

It was the sense of the Council that the present fiscal year be retained.

8. Minutes of the Executive Committee.—The minutes of the one hundred and thirty-fifth meeting of the Executive Committee as mailed to all councilors were presented for approval.

Action by the Council.—On motion of Kiger, seconded by Pallette, and unanimously carried, the following resolution was adopted:

Resolved, That the minutes of the one hundred and thirty-fifth meeting of the Executive Committee be approved, except the action recommended under item No. 3 referring to the fiscal year of the Association.

9. Retired Membership.—(a) A request was presented from the San Francisco County Medical Society asking that Campbell Ford be granted retired membership in the California Medical Association.

Action by the Council.—On motion of Schaupp, seconded by Phillips, and unanimously carried, the following resolution was adopted:

Resolved, That Campbell Ford, M.D., member of the San Francisco County Medical Society, be granted retired membership in the California Medical Association.

(b) A request was presented from the Santa Clara County Medical Society asking that Hannah Goodridge be granted retired membership in the California Medical Association.

Action by the Council.—On motion of Ullmann, seconded by Kelly, and unanimously carried, the following resolution was adopted:

Resolved, That Hannah Goodridge, San Jose, member of the Santa Clara County Medical Society, be granted retired membership in the California Medical Association.

(c) A request was presented from the Sonoma County Medical Society asking that Loftus H. Francis, Cotati, be granted retired membership in the California Medical Association.

Action by the Council.—On motion of Kelly, seconded by Rogers, and unanimously carried, the following resolution was adopted:

Resolved, That Loftus H. Francis, Cotati, a member of the Sonoma County Medical Society, be granted retired membership in the California Medical Association.

10. Personnel of Committee on Physical Therapy.—The following names were submitted by Doctor King for membership on the Committee on Physical Therapy: Doctors J. S. Hibben, Howard Naffziger, H. L. Langnecker, Rodney Atsatt, Charles L. Lowman and B. O. Raulston.

It was the sense of the Council that the membership of the committee as reported by Doctor King be approved.

The secretary was instructed to notify Doctor Hibben and the committeemen of the appointments.

11. Nominating Committee for Appointments on Standing Committees.—Discussion was had of the necessity for careful selection of appointees on standing committees by the Council for approval by the House of Delegates. Doctor King suggested that a nominating committee of three, preferably one from the north, one from the south and one at large, should be appointed to submit to the Council carefully chosen names of members peculiarly fitted to the vacancy to be filled.

Action by the Council.—On motion of Schaupp, seconded by Ullmann, and unanimously carried, the following resolution was adopted:

Resolved, That the chairman of the Council be authorized to appoint a nominating committee to suggest to the Council names of members for appointment on the standing committees.

It was agreed that the committee should consist of three members of the Council; one from the north, one from the south, and one at large.

12. County Society Charter.—Doctor King stated that on his recent trip through the northern part of the state, he had visited all doctors in Del Norte County and had suggested that a county society be chartered in Del Norte County. Doctor King then presented correspondence from J. L. Stump and a letter signed by all licensed M.D.'s in Del Norte County requesting that a charter be granted.

Action by the Council.—On motion of Rogers, seconded by Ullmann, and unanimously carried, the following resolution was adopted:

Resolved, That the Council recommend to the House of Delegates that a charter be granted to the Del Norte County Medical Society.

13. Corporate Practice.—Full discussion was had of corporate practice in California, and the possibility of action under authority of the Blake decision. The general counsel stated that lists of corporations whose activities in this respect had occasioned inquiry had been secured, and the matter had been taken up with the Board of Medical Examiners but that on account of certain unforeseen contingencies no action had been taken up to the present time.

It was suggested that Mr. Peart prepare a report on the corporate practice of medicine for submission to the House of Delegates with suggestions regarding the advisability and expense incident to securing enforcement of the law as announced in the Blake decision.

Action by the Council.—On motion of Duffield, seconded by Gibbons, and unanimously carried, the following resolution was adopted:

Resolved, That in accordance with the suggestions made, Mr. Peart prepare a report on this matter for presentation at the first meeting of the House of Delegates.

The inadvisability of action at the present time was pointed out, and on motion of Reinle, seconded by DeLappe, the following resolution was adopted:

Resolved, That consideration before the annual session be taken in executive session.

Action by the Council.—On motion of King, seconded by Kelly, and unanimously carried, the following resolution was adopted:

Resolved, That the secretary send Norman Sterry, Esq., of Los Angeles a letter of thanks for the Council for his interest in the matter of corporate practice.

14. Commitment Laws.—Discussion was had of the proposed changes in the commitment laws. Doctor Hunter stated that the proposed bill had been prepared by interested parties in the south; that expressions of opinion had been received from the Southern California Psychopathic Association as well as lawyers, social workers and interested laymen and that the proposed bill was based upon humanitarian practices.

Doctor Catton agreed that some revision of the bill was necessary and Doctor Hunter stated that there would be no objection to such revision.

Action by the Council.—On motion of King, seconded by Reinle, and unanimously carried, the following resolution was adopted:

Resolved, That the Council endorse, in principle, the proposed laws governing the commitment of the mentally sick as outlined by Doctors Catton and Hunter.

15. Health Association Bill.—Doctor Catton, member of the Legislative Committee, stated that Dr. Rodney Yoell, who was working on a proposed bill governing hospital associations with Doctors P. K. Brown and Ralph Reynolds, had expressed the desire to appear before some authoritative body of the State Association and present his ideas; and that Doctor Harris, chairman of the Legislative Committee, had secured permission from the chairman of the Council to invite him to present a proposed bill which Doctor Yoell had drafted before this meeting of the Council.

Doctor Yoell then stated that it was the intention of the committee which had prepared the proposed bill to present it for the consideration of organized medicine and to secure its reaction. The proposed bill was then read by Doctor Yoell and discussed briefly, and certain changes were recommended. Doctor Yoell was asked if the Council should endorse only part of the bill would he accept the recommendations of the Legislative Committee of the Association. Doctor Yoell replied that if a better bill were presented to the Legislature covering the elements set forth, he would be willing to withdraw his bill, but that if no other bill were presented he would go ahead with his bill. It was suggested that the bill be introduced at the first session of the Legislature by title only and that the details of the bill be worked out before the adjournment of the Legislature.

Doctor King requested that copies of the bill as submitted be sent to all members of the Council for study and that when the bill is introduced, a copy as introduced be sent to him at his expense. Doctor Yoell stated that he would introduce the bill by title within the next week, if that were possible; that on this point of procedure it would be necessary for him to consult his friends in the California Legislature.

Action by the Council.—On motion of King, seconded by Kress, and unanimously carried, the following resolution was adopted:

Resolved, That Doctor Yoell be thanked for bringing this matter before the Council.

16. **Clinic Bill.**—Mr. Peart read a proposed bill governing the licensing and control of clinics, which he stated he had prepared at the direction of the Committee on Public Relations, and which would be introduced in the Legislature at the committee's suggestion. He asked that the Council carefully study the bill when copies thereof were available.

17. **Noon Adjournment.**—At this point, adjournment was taken for luncheon.

18. **Call to Order.**—The afternoon session of the Council was called to order by the chairman.

19. **Medical Service Plan of Santa Clara County Society.**—Dr. John Hunt Shephard, chairman of the committee appointed by the Santa Clara County Society to confer with the Council of the California Medical Association, presented a report on a medical service plan proposed in Santa Clara County.

Full discussion was had by members of the Council. It was pointed out that several other counties in the state were working on medical service plans and that requests for similar funds would probably be received from other counties if such precedent were established.

The Council felt that it could not establish the precedent of underwriting any one medical service plan at this time but that any plan undertaken would have the assistance of the Public Relations Committee.

20. **Hospital Association Legislation.**—The general counsel stated that a hospital association bill had been introduced by Senator Seawell in the Legislature (senate bill 160). It was felt that the only persons qualified to furnish medical service were licensed practitioners.

It was stated that the attitude of the Council had already been expressed at Sacramento and was "that only bills regulating organizations or individuals selling hospitalization could be approved and that no bill providing for the furnishing of medical service by corporations or laymen or by any one other than licensed practitioners should be enacted.

Action by the Council.—On motion of Gibbons, seconded by Duffield, and unanimously carried, the following resolution was adopted:

Resolved, That all bills authorizing any hospital association, incorporated or unincorporated, to furnish medical or surgical service be opposed and that decision as to any necessary action be left to the discretion of the Executive Committee.

21. **Council Meeting.**—Further discussion was then had of proposed legislation and it was felt that a special meeting of the Council should be held.

Action by the Council.—On motion of Schaupp, seconded by Peers, and unanimously carried, the following resolution was adopted:

Resolved, That a special meeting of the Council be held at such time as proposed legislative bills are in form for intelligent consideration; and that the chairman of the Council be authorized to set the exact date.

22. **County Hospital Legislation.**—Discussion was had of the feasibility of the enactment of a county government act which would provide for a county institutions commission for each county, similar to that now established in Alameda County, to act in an advisory capacity to the Board of Supervisors.

Action by the Council.—On motion of Duffield, seconded by Kiger, and unanimously carried, the following resolution was adopted:

Resolved, That the general counsel be asked to prepare such bill providing for County Institution Commissions.

23. **Narcotic Legislation.**—Doctor Duffield reported on the economies proposed in the enforcement of narcotic control in California. Doctor Duffield stated that proposals had been made to abandon the Narcotic Hospital at Spadra and to dissolve the Narcotic Enforcement Division.

Action by the Council.—On motion of Duffield, seconded by Gibbons, and unanimously carried, the following resolution was adopted:

WHEREAS, California has won distinction among our states as the creator of a model code of laws protecting our people from drug addiction and the illicit narcotic traffic; and

WHEREAS, Inimical bills have been introduced in our Legislature threatening the abolishment of our State Narcotic Division for the enforcement of these laws, and threatening the extinction of our State Narcotic Hospital at Spadra for the treatment and rehabilitation of drug addicts; and

WHEREAS, We fully recognize the necessity of great economy in state government, but we are convinced that great economy can be brought about in the conduct of our State Narcotic Division without sacrificing efficiency, and we know that the cost of maintenance of the State Narcotic Hospital can also be substantially reduced inasmuch as the superintendent believes that about one hundred thousand dollars will be sufficient for the biennium; and

WHEREAS, The abolition of our State Narcotic Law Enforcement and rehabilitation work will result in a greater spread of drug addiction among our people and will cost the taxpayers a much greater sum of money directly through the increase of crime and indirectly through the added burden thrown upon our courts, jails and hospitals; therefore, be it

Resolved, That the Council of the California Medical Association go on record in opposition to this proposed legislation, which is certainly opposed to an enlightened, wise, and humanitarian solution of this very serious problem, and we most respectfully urge our governor and our Legislature to protect the great advances made in recent years in our battle against the curse of drug addiction; and be it further

Resolved, That copies of these resolutions be sent to the governor and to the members of the Legislature and the several county medical associations of this organization.

24. **Advisory Committee to the Department of Institutions.**—Dr. Joseph Catton, chairman of the Advisory Committee to the Department of Institutions, which committee was appointed by the president during 1931 to advise the director of the Department of Institutions, reported on the activities and the recommendations made by the committee.

Action by the Council.—On motion of Peers, seconded by Kress, and unanimously carried, the following resolution was adopted:

Resolved, That the report of the committee be accepted and the committee be thanked for its services and be discharged; and if appointment of another committee is desired by the director and he communicates with the secretary of the California Medical Association, the Council will arrange a meeting with him at which time the duties of such committee will be set down more specifically.

The secretary was instructed to notify Doctor Toner of the action of the Council.

25.* (See footnote.)

26.* (See footnote.)

27. Letter of San Francisco County Society re Medical Service Principles.—A letter from the Board of Directors of the San Francisco County Medical Society requesting information on the principles adopted by the Council as a basis for any plan of medical service, was read as follows:

"The Council of the California Medical Association, 450 Sutter Street, San Francisco.

"A letter dated October 27, 1932, signed by the director of the Department of Public Relations forwarded to the secretary of this society has been received, setting forth certain principles adopted by the Council of the California Medical Association for the guidance of county medical societies which may desire to formulate a plan of medical service on an insurance basis. This letter has been presented to the Board of Directors of the San Francisco County Medical Society.

"Are we correct in assuming that this letter deals with the same matter which has since become popularly known as the 'Graves Plan'? If so, we have had the matter called to our attention in the columns of the daily press and also in the *Literary Digest* where the source is credited to a news release by Dr. G. P. Porter, director of the California State Department of Public Health.

"It was our understanding that the set of principles was to be presented to the county medical societies for their consideration and that the formulation of a plan based upon these principles was to be optional with each county society.

"Was it the intention of the Council to have further discussion and popularization of such a plan conducted in the lay press and before lay gatherings, or did it intend the plans to be studied quietly by the component county societies, some of whom might decide to pioneer organizations similar to those envisaged in the plan?

"If the Council intended lay publicity, did it contemplate this publicity as conducted by the California State Department of Public Health?

"Are the details of these plans, especially the rates to be charged for family and minor children's services so easily determined as the proponent of the plan is quoted as saying in the *Literary Digest*?

"If so, can the San Francisco County Medical Society have some help as it finds the question without answer so far?

"Finally, will the Council make a public statement of its purposes in regard to this so-called plan, so that the confusion existing in the minds of the members of this society (and others), that has been engendered by the numerous statements appearing in the lay press, since any announcement by the Council, may be cleared and the medical profession and the public of California may know in simple terms just what the California Medical Association intends?

"Very truly yours,

"The Board of Directors of the San Francisco County Medical Society,

"By (Signed) MARY JONES-MENTZER, M. D.,
Secretary."

* Note.—Minutes 25 and 26 refer to matters still under consideration by the Council. Publication will be made in due time by Council secretary.

Discussion was had of the publicity given the principles in the lay press and by the Department of Public Health.

It was the sense of the Council that no clear statement had been made by the Association as to the intent of the Council in adopting the principles and that the California Medical Association should send out a letter by its Council to all county societies telling exactly what is meant by the principles and the purposes of the Council in regard to the principles and tentative forms of organization which it has had prepared.

Action by the Council.—On motion of Ullmann, seconded by Reinle, and unanimously carried, the following resolution was adopted:

Resolved, That the Council notify the component county medical societies that it has approved a set of principles and four forms of service to meet various local situations; and that such component county societies as may wish to adopt one or more of the above types may write for copies of such principles and types of service, modify them to suit local conditions, and return the modified forms for approval by the Committee on Public Relations and endorsement by the Council of the California Medical Association. The component county society is then ready to act, if by two-thirds vote of its members it decides to do so; and be it further

Resolved, That a letter be sent to the San Francisco County Medical Society stating that the Council has so far adopted only the principles and types of service that may be used by component county societies; and be it further

Resolved, That a letter be written to the director of the State Department of Health, Giles Porter, explaining the position in which publicity through the *Bulletin* of the State Department of Public Health has placed the California Medical Association and requesting that no further publicity be given in the weekly *Bulletin*.

28. Membership Roster.—George H. Kress, editor, submitted five different forms and relative costs for the membership roster to be published in the March issue of CALIFORNIA AND WESTERN MEDICINE.

Action by the Council.—On motion of Kress, seconded by Schaupp, and unanimously carried, the following resolution was adopted:

RESOLVED, That the roster in the form which consists of the surname, initials, city and key number for the county society be published in the March issue of CALIFORNIA AND WESTERN MEDICINE and that the cost of such roster be carried as a charge of the California Medical Association.

29. Article by William Woodward.—The editor stated that Doctor Pinkham had forwarded an article by Doctor Woodward, Bureau of Legal Medicine and Legislation of the American Association on "California Chiropractic as a Lawyer Sees It."

It was the sense of the Council that there was no objection to the publication of the article, but that proofs should be sent to Doctors Kelly, King, Reinle and Mr. Peart.

30. Annual Session Cuts.—Discussion was had of the publication of photographs of invited guests, section secretaries, etc., in the program number of CALIFORNIA AND WESTERN MEDICINE. It was pointed out that the inclusion of such photographs added materially to the makeup of the program number.

Action of the Council.—On motion of Kress, seconded by Kelly, and unanimously carried, the following resolution was adopted:

Resolved, That the same custom be followed as in the past.

31. Reports of Officers and Standing Committees.—It was the sense of the Council that the same custom be followed in regard to the *Pre-Convention Bulletin* as in the past, the expense of its publication in CALIFORNIA AND WESTERN MEDICINE to be charged as a separate item from CALIFORNIA AND WESTERN MEDICINE.

32. California and Western Medicine.—Doctor Kress reported on certain economies that had been effected in publication of the *JOURNAL*, namely a reduction of printing costs of approximately \$100 per month, which included monthly reductions of \$50 on stitching, \$30 on inserts and approximately \$20 on wrapping and mailing costs.

33. Conference on Medical Economics.—Doctor Dickie, director of the Department of Public Relations, stated that a letter had been received from the secretary of the Oregon State Medical Society suggesting that it might be advantageous for the California, Washington and Oregon societies to hold a conference on medical economics; that the letter had been considered by the Executive Committee and the Committee on Public Relations and referred to the Council without recommendation.

Action by the Council.—On motion of Ullmann, seconded by King, and unanimously carried, the following resolution was adopted:

Resolved, That the letter from the Oregon State Medical Society be tabled.

34. X-Ray Fee Schedule.—Doctor Gibbons stated that new complications had arisen and that the matter of x-ray fee schedules could properly lie over until the March Council meeting. So ordered.

35. Activities of Health Officers.—Doctor Dickie presented correspondence received from the director of the State Department of Health, the Orange County health officer and the health officers of San Luis Obispo and San Joaquin counties relating to the activities of health officers in carrying on immunization campaigns.

The Council felt that the proper division of medical care is that prophylaxis is the function of the health department, and treatment, the function of the physician.

Action by the Council.—On motion duly made, seconded and carried, the following resolution was adopted:

Resolved, That the House of Delegates consider the matter of activities of health officers.

36. Cancer Commission.—The secretary read a letter from the Cancer Commission which stated that inquiries had been received as to the value of the Coffey-Humber treatment for malignancy and asking for instruction from the Council regarding the handling of such inquiries, and further suggesting that the Council direct an inquiry into all pertinent facts covering organization and conduct of all such clinics.

Action by the Council.—On motion of Duffield, seconded by Gibbons, and unanimously carried, the following resolution was adopted:

Resolved, That any inquiries received be referred to reprints published by the White Memorial Hospital and that the Cancer Commission be advised that the Council is not empowered to investigate clinics.

37. Meeting of Hospital Executives.—Doctor Dickie reported on the meeting of the Hospital Executives to be held at Long Beach, February 22, 23 and 24. Doctor Dickie stated that the Committee on Public Relations considered it advisable that representatives of the California Medical Association be present at the meeting since hospital insurance was to be considered.

38. Alameda County Medical Service Plan.—Doctor Dickie stated that Mr. Peart had asked that the Council assist the Council of the Alameda County Society in formulating certain papers necessary for a hospital insurance plan the society is working on. No objection.

Doctor Dickie stated that the Committee on Public Relations had authorized the publication in the Department *Bulletin* of the principles adopted by the Council for medical service and hospitalization and the medical service and hospital plan of the Alameda County Society. No objection.

39. Woman's Auxiliary.—The secretary presented a request from Mrs. Percy, president of the National Woman's Auxiliary, for a gift of \$250 from the California Medical Association to carry on the National Aux-

iliary program. Doctors Reinle and Duffield spoke of the excellent work carried on by the Auxiliaries in Alameda and Los Angeles counties.

Action by the Council.—On motion of Reinle, seconded by Duffield, and unanimously carried, the following resolution was adopted:

Resolved, That a gift of \$250 be granted to the president of the National Woman's Auxiliary in consideration of the fine work done by certain local Auxiliaries.

40. Clinical Prize Rules.—The secretary stated that the question had been raised of eligibility of a paper for the Clinical and Research Prize Contest, which paper was prepared by a member of the California Medical Association in collaboration with a medical student. It was the sense of the Council that Rule No. 1 governing submission of papers, which provided that "Any member of the California Medical Association is eligible to compete for the prizes" covered the question and that the paper was ineligible for submission in the contest.

41. Kern County Society.—The secretary presented a resolution passed in regular meeting of the Kern County Medical Society.

It was pointed out that the petition was signed by but twenty members of the society and by one prospective member and by one proxy.

It was the sense of the Council that no action be taken until after receipt of the additional signatures promised in the accompanying letter from Kern County.

42. Election of Trustee for Indemnity Defense Fund.—The secretary stated that the term of office of Junius B. Harris, trustee of the Indemnity Defense Fund, had expired.

On nomination of Phillips, seconded by Ullmann, Dr. Junius B. Harris was elected trustee for the Indemnity Defense Fund for a period of three years; term expiring 1936.

43. Adjournment.—There being no further business, the meeting adjourned.

O. D. HAMLIN, *Chairman.*

EMMA W. POPE, *Secretary.*

EXECUTIVE COMMITTEE*

Digest of the Minutes of the One Hundred and Thirty-fifth Meeting, Held at San Francisco, December 3, 1932

1. Roll call.
2. Financial statements for September and October, 1932, were presented and approved.
3. Recommendation to Council for change in fiscal year of Association.
4. Proposed budget for 1934-1935 presented by chairman of Auditing Committee. Budget revised for presentation to Council at January meeting.
5. Annual session: (a) Report by secretary on invited speakers; (b) report on meeting rooms at Del Monte and resolution adopted that all arrangements for meeting rooms be made through offices of Association; (c) program for second general meeting placed in charge of Public Relations Department; (d) it was the sense of the Executive Committee that the charge for exhibit space at the annual session be on the same basis as last year.
6. Correspondence of member re industrial accident fee schedule referred to director of the Department of Public Relations with request that he contact Industrial Commission and submit conjoint report to Council.
7. Chairman of Executive Committee authorized to answer letter requesting information on activities of the Moore-White Clinic and the Columbia Casualty Company.

* For the information of members, digests or summaries of the minutes of the Executive Committee meetings are compiled for publication in CALIFORNIA AND WESTERN MEDICINE.

8. Question of ethics involved in consultation with licensed practitioners other than doctors of medicine raised by member. Left to individual decision.

9. Letter from member presented. Case outlined in letter deemed not within the jurisdiction of the State Association.

10. Resolution adopted by county society of Georgia advocating limitation of graduates from medical schools presented by editor. No action taken.

11. Letter from member of the Orange County Society regarding activities of local health officers presented. Referred to Department of Public Relations.

12. Letter of invitation from secretary of the Oregon State Medical Society to the California Medical Association to participate in conjoint Conference on Medical Economics referred to Council.

13. Letter prepared by Counsel for information of members of medical society authorized sent to members of California Medical Association.

14. Report on clinic at San Diego. Secretary authorized to send information on file to Doctor Pinkham and request action.

15. Auditing Committee authorized payment of expenses and disbursements incurred by general counsel.

16. Authorization of *Bulletin* to be published by Committee of Public Relations; cost of same to be included in budget of department.

17. Transportation costs of Committee on Public Relations to be included under budget of Department of Public Relations.

18. Request by chairman that Executive Committee make a restatement of purposes of California Medical Association and the medical service plan approved by the Council at the September meeting in order to counteract confusion and misrepresentation existing among public and members of the profession. No action taken.

19. Report by chairman of Legislative Committee on proposed legislation inimical to interests of medical profession. Veterans' legislation and proposed clinic bill considered.

20. Secretary instructed to write county health officer of Imperial County that protest against milk inspection being taken from health officers and placed under the Department of Agriculture would be given publicity in JOURNAL.

21. Adjournment.

T. HENSHAW KELLY, *Chairman*.
EMMA W. POPE, *Secretary*.

Digest of the Minutes of the One Hundred and Thirty-sixth Meeting of the Executive Committee, Held at San Francisco, February 4, 1933

1. Call to order.

2. Presentation of letter from Doctor Harris, chairman of the Legislative Committee, regarding bills of interest to public health and scientific medicine.

Resignation of Joseph Catton, member of the Legislative Committee presented. Recommendation of Executive Committee to Council that Doctor T. Henshaw Kelly be appointed to fill the unexpired term.

Doctor Harris authorized to employ secretarial help during session of legislature. Reasonable cost to be defrayed by Association.

3. Suggested that chairman of Council set February 18 as next meeting of Council.

4. Decision regarding certain legal expense left to next Council meeting.

5. Secretary reported county society dues of eight members covered by check on closed bank of Colusa dishonored. Sense of committee members be carried in good standing for reasonable length of time.

6. General counsel called attention of Executive Committee to a decision of District Court of Appeals in which x-rays were deemed to be like photographs and could be interpreted by anyone. Legal counsel instructed to prepare and file an amicus curiae brief. Expenditure of \$200 authorized to cover such brief.

7. Adjournment.

T. HENSHAW KELLY, *Chairman*.
EMMA W. POPE, *Secretary*.

COMPONENT COUNTY MEDICAL SOCIETIES

ORANGE COUNTY

On February 28 a special meeting was held in the Chapel of the Orange County Hospital for the purpose of hearing the state president, Joseph M. King. He gave us a very instructive hour on legislation now pending. Some of the supervisors were also present.

* * *

The regular meeting was held at the same place on March 7. Doctor Sellon, as chairman, had arranged a very interesting and highly instructive program. Doctor Newkirk briefly presented a case of strabismus corrected by surgery and eye exercises. Dr. Theron Johnson presented a case of traumatic trachoma, and both he and Doctor Beasley gave papers on this difficult subject. Doctor Curry presented a case of malignancy of the antrum treated by surgery and radiation. This was ably discussed by Doctors Earel and Chase. Doctors Newkirk, Price, and Abbott gave neurologic cases, with ventriculograms.

Mrs. King of the Orange County Nursing Association outlined the schedule for hourly nursing service.

Doctor Domann was appointed to serve on the Legislation Committee.

The second reading of six new applications was heard, and Doctors Bruning, Earel, Gillispie, Huene-gardt, Nies, and Weston were elected to membership.

A committee of Doctors Baker and Olson were appointed to serve in connection with the State Physiotherapy Committee, of which Doctor Hibbens is chairman.

Doctor Olson presented display cards he uses in his office urging parents to have their children immunized.

Doctor Hollingsworth spoke very enlighteningly on the Orange County Coöperative Exchange, which charges one dollar for membership and ten per cent of each exchange.

The Association went on record as being strongly opposed to any coöperative movement such as this in which the promoters received any percentage for the privilege of using an M. D.'s services for barter.

After further discussion on this interesting phase of medical economics the meeting adjourned.

WALDO S. WEHRLY, *Secretary*.

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PLACER COUNTY

The Placer County Medical Society held its March meeting at the Placer County Charity Hospital, Auburn, on Saturday evening, March 11. The meeting was called to order by the president, Dr. L. B. Barnes.

There were present the following members and visitors: Members—Doctors L. B. Barnes, Atkinson, Crossen, Kindopp, Russell, Miller, Mackay, Peers, Louis E. Jones, Radford, Dunievitz, C. C. Briner, Monica Stoy Briner, and Thoren. Visitors—Doctors Leonard B. Barnard and Robert Stewart Peers of Oakland, Ward of Auburn, Pulford of Sacramento, Henry Gibbons of Lane Hospital, San Francisco; Doctors Vinks and Lincoln, and Miss Anna M. Brubaker of Highland Hospital, Oakland.

The application for membership of Dr. Watslo Anthony Vinks of Lincoln was read. The application of Doctor Vinks will come up for approval at the next meeting.

Resolutions on the death of Dr. George Howard Fay were read and adopted.

A letter from Dr. S. S. Kalman asking for transfer card to Alameda County Medical Society was read, and the secretary reported that Doctor Kalman's request had been complied with.

A letter from Dr. R. O. Schofield, secretary of the Northern District, California Medical Association, extending an invitation to members to attend the Northern District meeting at Chico on Wednesday, April 12, was read.

A letter from Doctor Pope calling attention to the great value of the minute-book containing the minutes of the society, following its organization in 1889, and

offering the use of the fireproof files in the Association's historical file, for the better protection of these minutes, was read. Doctor Pope's offer was accepted.

Correspondence from the state office as well as letters from the California Cancer Commission and the Committee on Physical Therapy, together with various resolutions in the secretary's files, were read.

Dr. L. B. Barnes reported a case of fracture of the femur and fracture of the tibia in a Chinese patient recently under his care.

There being no further business the president called upon Dr. Robert Stewart Peers of Oakland, who presented a paper on *The Arthritis Problem*. Doctor Peers gave a brief résumé of the arthritis problem, with special reference to the incidence, dissemination, pathology, and laboratory features of proliferative (atrophic) and degenerative (hypertrophic) arthritis. He drew a pessimistic picture of the prognosis if we are to continue to deal with such types as now present themselves for attention. A more optimistic outlook is warranted if diagnosis precedes deformities and patients can be made subject to as full control as is exacted in other diseases, notably tuberculosis. The doctor also gave a summary of therapeutic measures at our disposal, with emphasis on the limitations of such therapeutic measures.

Doctor Peers' paper was discussed by Doctors Pulford, Barnard, Gibbons, and Robert Stewart Peers.

The president introduced Dr. Leonard B. Barnard of Oakland, who gave an address on *The Newer Method in Some Common Fractures*.

Doctor Barnard selected four types of fractures and their treatment, illustrating his remarks by means of lantern slides. The types presented were: (1) The "Wallace" collar in fracture; (2) The manipulative reduction of "bumper fractures" of the knee; (3) The hyperextension method in compression fracture of the spine; and (4) The "Russell" fracture method in fracture of the femur.

Doctor Barnard's paper was discussed by Doctors Kindopp, Pulford, Mackay, and C. C. Briner.

ROBERT A. PEERS, *Secretary*.

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SACRAMENTO COUNTY

A regular meeting of the Sacramento Society for Medical Improvement was held at the Elks Hall on January 17, at 8:30 p. m. Seventy-two members were present.

The president, Dr. George Briggs, called the meeting to order.

Dr. Nathan G. Hale presented an interesting case of *Aplastic Kidney*. This infantile kidney had been a focus of infection, and its removal cured the patient. Doctor Hale outlined the following points of interest in this case: (1) It is a rare condition. (2) Pyelographic studies demonstrated a normal kidney pelvis present in this infantile kidney. (3) It caused extreme pain and recurrent attacks of fever over a period of years. (4) Blood culture was positive when the infection in this kidney would flare up into activity, and negative during the quiescent periods. (5) This aplastic kidney was a focus of infection for a generalized septicemia and caused an infection in the normal kidney.

The paper for the evening, *Experimental and Clinical Observations on the Use of Kaolin in Intestinal Infections*, was presented by Dr. Louis H. Braafladt. While in China Doctor Braafladt was head of the department of pathology and bacteriology at Shantung University and had an opportunity to study many types of intestinal infections. In his paper he outlined the history of kaolin. It was used first in porcelain ware in China hundreds of years ago. Kaolin is feldspar of granite. Its use in the treatment of cholera, typhoid, botulinus, and dysentery infections was discussed. The toxins produced by the bacteria of the above diseases are definitely neutralized by large doses of kaolin. The mortality of cholera has apparently diminished due to the use of kaolin. The paper was discussed by Doctors O. F. Johnson, Edward Babcock and F. B. Reardan.

Major Roger Hillsman of the United States Regular Army showed some interesting films, demonstrating

the newer infiltration method of the treatment of leprosy.

Dr. George Briggs asked that \$500 be spent to make a survey of the medical conditions in Sacramento County. In the discussion which followed, Doctor Reardan made a motion that the board of directors authorize the expenditure of not more than \$500 for the purpose of making a medical survey of Sacramento County. The motion was discussed by Doctors Pitts, Schoff, Young, Lindsay, Howard Hall, Kelsey, and Christman. The above motion was seconded, and carried.

Dr. George Briggs appointed the following committees for 1933:

Public Relations Committee—Doctors Young (chairman), Edward Babcock, Christman, Frank MacDonald, and Drysdale.

Banquet Committee—Doctors Farrell (chairman), Schoff, and Foster.

Program Committee—Doctors Hopkins (chairman), Dozier, and Hilding Johnson.

FRANK WARNE LEE, *Secretary*.

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SAN BERNARDINO COUNTY

The meeting of the San Bernardino County Medical Society, held at the County Charity Hospital on Tuesday, March 7, was called to order by the president at 8:10 p. m.

Doctor Ullmann, state councilor for the third district, made a brief address on legislation. The secretary followed with a short explanation of the work of the Medical Advisory Board of our county hospital.

The applications of Doctors Engel, Ingham, and Canfield were voted on and accepted.

A communication from Doctor Godfrey regarding a County Health Department meeting to be held on Friday, March 31, was read.

The scientific program of the evening followed: Dr. Walter Pritchard of San Bernardino spoke on *Excretion Urography*.

Some Facts and Aspects on Transureteral Prostatic Resection, illustrated by motion pictures, was presented by Dr. Ivan L. Finkelberg of San Bernardino.

Discussion was opened by Dr. E. J. Eyttinge.

E. J. EYTINGE, *Secretary*.

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SAN JOAQUIN COUNTY

The stated meeting of the San Joaquin County Medical Society was held on Thursday, March 2, in the Medico-Dental clubrooms. The meeting was called to order at 8:15 p. m. by President Doughty.

The minutes of the special meeting of the board of directors were read and approved.

Doctor Doughty made a verbal report of the visit of the president and the secretary to the Board of County Commissioners, and the secretary read a copy of the letter submitted to them. Doctor Doughty also reported on the meeting of the San Jose County Medical Society at which a plan for hospital and medical insurance was considered.

The first paper of the evening was given by Dr. Ralph A. Reynolds of San Francisco on *Health Insurance*. Doctor Reynolds reviewed the report and findings of the Committee on the Costs of Medical Care. He spoke of the top-heavy bureaucrasies existing for the administration of state medicine in foreign countries and urged the necessity for such activities to be controlled in this country by nonprofit associations made up from our county medical societies. He urged that we prepare plans and put them into operation before vicious state bills are introduced and become law.

His paper was discussed by Doctors Doughty, Van Meter, Broadus, Dewey Powell, Sippy, Sanderson, Sheldon, and Chapman.

In conclusion, Doctor Reynolds said that his study of the subject has convinced him that insurance for the hospital, x-ray, laboratory, and nursing expense should be provided first. The individual relation of patient and physician should be preserved as long as possible. Plans for medical care insurance can be developed gradually as experience shows the way.

Before speaking on his subject, Dr. A. R. Kilgore chose to discuss Doctor Reynolds' paper, and especially in the light of the development of study by the San Francisco County Medical Society. He said that the San Francisco society planned to start with large groups, such as lodges and employees of factories, etc., rather than with individuals. By this means they hoped to get persons of average health so that the incidence of care and treatment would be low. By this means the employer or administrative heads would attend to the collection of fees and thus cut down the overhead of the insurance group from 20 to 40 per cent. He stated that 75 to 80 per cent of the employed in San Francisco are receiving less than \$100 per month. When necessary most of these persons are now going to the free clinics. Doctor Kilgore figures from data at hand that with mixed groups like employees the cost per month would be divided as 60 cents for hospital, 60 cents for sickness and surgery, and 30 cents for overhead. This means a very low fee for the physician, and should be limited to the class of \$1,500 or less per year. For the higher paid groups the fee should be more, and the increase go to compensation of the physician.

Doctor Kilgore also spoke briefly of the work of the Cancer Commission and the results they had attained.

C. A. BROADDUS, *Secretary*.



SANTA BARBARA COUNTY

The regular meeting of the Santa Barbara County Medical Society was held in the Bissell auditorium of the Cottage Hospital on Monday evening, March 13.

Doctor Markthaler introduced to the members Dr. Alexander Lambert of New York City, who gave a most comprehensive and instructive talk on the treatment of the pneumonia patient. This paper was discussed and questions asked by Doctors Spaulding, Evans, Smith, Shelton, Main, Roome, Lamb, and Ussher.

At the conclusion of the scientific program the society went into executive session.

A communication from the American College of Surgeons was read and ordered filed.

Doctor Freidell presented a resolution which had been adopted by the Board of Supervisors and the staff of the County Hospital. Doctor Markthaler reported that this resolution had been discussed with the Public Relations Committee, but no action was taken. There was further discussion by Doctors Bakewell, Brown, Johnson, Ullmann, and Berry. During the discussion it was brought out that this resolution was already known to the state councilors, and upon motion of Doctor Freidell, seconded and carried, it was referred to the Public Relations Committee.

Doctor Freidell gave a preliminary report of the committee appointed to investigate conditions at the Santa Maria Hospital. As further time was needed to complete the report for some future meeting, no action was taken.

WILLIAM H. EATON, *Secretary*.



SONOMA COUNTY

The regular monthly meeting of the Sonoma County Medical Society was held at The Tavern, near Santa Rosa, at 7 p. m. on March 9. Doctor Mark L. Lewis, president of the society, presided. Fifteen members were present.

Dr. William B. Faulkner, Jr., of San Francisco addressed the society upon the subject of *Postoperative Pneumonia*. His able presentation of this subject was well received and highly appreciated.

Routine business was transacted and the meeting adjourned.

W. C. SHIPLEY, *Secretary*.



TULARE COUNTY

The regular monthly meeting of the Tulare County Medical Society was held at Motley's Café on February 26, preceded by a dinner. The meeting was called to order at 7 p. m. Doctor Fowler acted as secretary in the absence of Doctor Weiss.

Three new members—Doctors Thomas Mooney of Springville, W. R. Bridgman of Hanford, and Palmer D. Miller of Dinuba—were elected to membership in the society by unanimous vote.

Correspondence included an invitation to members to attend conferences on microscopic pathology and x-ray malignancy at the coming convention of the California Medical Association at Del Monte in April.

Doctor Lipson, chairman of the Committee on Public Relations, reported that a meeting had been held with the Board of Supervisors of Tulare County and that the following subjects were discussed:

The Board of Supervisors tabled their proposal to admit pay patients to the Tulare County General Hospital.

The proposal of the Tulare County Medical Society to change the name of the Tulare County General Hospital to "The Tulare County Charity Hospital" was not favored.

The Board of Supervisors were desirous of reducing the amount spent annually by the county for post-mortem examinations, and suggested that this might be accomplished by having autopsies performed by the county physician or by some other doctor on a contract basis, and that the board wished the advice of the medical society on how best to handle this matter.

The board was also anxious to reduce the cost of administering the county health office and requested advice from the medical society on how this might be accomplished. It was stated that the board proposed to receive bids from doctors who might desire the position of county health officer and appoint that doctor who would take care of all work connected with that department at the lowest rate.

The board also wished the aid of members of the society in handling semi-indigent patients applying for treatment as clinic or bed patients at the County Hospital.

These last three subjects were discussed at some length by various members of the society.

It was pointed out that the performing of an autopsy was valuable to the individual physician from an educational standpoint. The suggestion was made that a reduction in the fee might be considered, but it was pointed out that the fee for this service had been \$50 in former years and that the present fee of \$25 was low enough, considering that in addition to performing the autopsy the physician was required to present his findings before the coroner's jury or grand jury or both.

The motion was made and passed that it be the consensus of opinion of the society that the present fee be maintained, and that the matter be referred to the Committee on Public Relations with authority to act for the society at its next meeting with the Board of Supervisors.

Affairs of the health office were discussed in some detail, and in the end it was moved and passed that the choice of health officer and management of his duties be referred to the Public Relations Committee for discussion with the Board of Supervisors with authority to act for the society, it being the desire of the society that the selection of a health officer, if any change be made, be not determined on a basis of lowest bidder, but that the committee have a voice in his selection and assist the board in determining a fair salary and system of management.

Regarding the management of the semi-indigent patient who applied to the Welfare Board for treatment, it was decided that if the Welfare Board would refer such patient back to the doctor selected by the patient with a statement of his financial status that the members of the society would give such patient treatment for a fee appropriate to his financial status or such as might be specified by the Welfare Board, and that members of the society would abide by such details of the plan as might be arranged between the Committee on Public Relations and the Board of Supervisors.

It was also hoped that some such plan could be arranged with private hospitals of the county.

President Kohn introduced the speaker of the evening, Dr. C. W. Mack, psychiatrist of the Livermore

Sanitarium, who gave an interesting and highly instructive talk on *The Treatment of Functional Mental Diseases*. The discussion which followed gave evidence of a lively interest in this topic. A motion to extend Doctor Mack a rising vote of thanks was promptly accepted.

Members present were: Doctors Johnstone, Lipson, A. Miller, Furness, Hicks, Betts, Hill, Ginsburg, E. C. Bond, Guido, Zellar, A. Bond, Tourtillot, Parkinson, Watke, Brigham, N. Miller, Preston, McClure, Kohn, P. Miller, Mooney, Zumwalt, Fowler, Mitchell, C. W. Mack, Bridgman; and one guest, Mrs. Ed Miller.

DONALD C. FOWLER, *Secretary Pro Tem*.

CHANGES IN MEMBERSHIP

New Members (60)

Alameda County.—Charles Paul Higgins, Haig H. Mitchell, John Joseph Sullivan.

Fresno County.—K. W. Butler, William Henry Gillett, Walter Levin.

Imperial County.—Donald Barber Marchus.

Lassen-Plumas County.—William Baird Knight.

Los Angeles County.—

Benton N. Colver	Albert E. Nelson
Charles Albert Fisher	Joseph Raymond Perry
W. H. Goeckerman	Thair Cozzens Rich
George O. Gordon	Alfred Rowland Robbins
C. Ward Irish	Helen H. Robinson
George F. Juenemann	J. Francis Schefcik
Allen M. Kilgore	Ralph Myron Tandowsky
J. Ralph Lacoe	Charles William Thompson
Solomon Malis	Harold F. Thompson
Samuel M. Martins	Royal Grover Tucker
James H. McGranahan	Albert John Wineland
William T. McKay	Wesley Milton Wright
Ralph Edward Merrill	

Mendocino County.—Joseph John Kirwin, Olga Alice Miller, George S. Wrinkle.

Monterey County.—Lenard Milo Andrus, Curtis Byron Gorham.

Sacramento County.—George Meredith Uhl, Louis H. Braafladt.

San Bernardino County.—Chauncey Baird, Samuel Benjamin Pond.

San Diego County.—Alfred John Cantoni.

San Francisco County.—Howard Alexander Brown, Victor Michael Dillon, Sherman Leland.

San Luis Obispo.—Charles Robert Kennedy, Earl Beardsley King.

Santa Cruz County.—Walter L. Ellis, Newton C. MacLafferty, George P. Tolman.

Shasta County.—W. M. Wilson, O. J. Hansen, H. E. MacDonald.

Siskiyou County.—J. Roger Campbell.

Tulare County.—Thomas Sylvester Mooney, Wallace Benson Parkinson.

Ventura County.—Claude Garrison Drace, W. F. Mosher.

Yolo-Colusa-Glenn County.—Maude Hester Tillotson.

Transferred (3)

M. A. Broemser, from Fresno to Santa Clara County.

John J. Fitzgerald, from Tehama to Contra Costa County.

Charles H. Law, from San Luis Obispo to Shasta County.

Resigned (11)

Hilda M. Davis, from San Francisco County.

Salvatore Cieri, from Alameda County.

Lloyd B. Dickey, from San Francisco County.

Mary E. Glover, from San Francisco County.

Bernice M. Hazen, from San Francisco County.

Carlos Leiva, from San Francisco County.

Malvina E. Moore, from Alameda County.

William H. Ross, from San Diego County.

Richard R. Rupert, from Alameda County.

Lydia J. Shimkin, from San Francisco County.

George E. Sutton, from San Francisco County.

In Memoriam

Berry, Andrew Jackson. Died in Los Angeles, February 12, 1933, age 68 years. Graduate of University of Louisville School of Medicine, Kentucky, 1890, Barnes Medical College, St. Louis, 1897. Licensed in California, 1901. Doctor Berry was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

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Carey, George H. Died January 31, 1933, age 57 years. Graduate of Hahnemann Medical College and Hospital, Chicago, 1901. Licensed in California, 1914. Doctor Carey was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.

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Fay, Franklin Goble. Died February 14, 1933, age 68 years. Graduate of Bennett Medical College, Chicago, 1886. Licensed in California, 1886. Doctor Fay was a member of the Sacramento Society for Medical Improvement, the California Medical Association, and a Fellow of the American Medical Association.

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Fay, George Howard. Died in Auburn, February 24, 1933, age 69 years. Graduate of Cooper Medical College, San Francisco, 1902. Licensed in California, 1902. Doctor Fay was a member of the Placer County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

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Irwin, William Hayes. Died in Oakland, March 13, 1933, age 57 years. Graduate of Cooper Medical College, San Francisco, 1904. Licensed in California, 1904. Doctor Irwin was a member of the Alameda County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

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Mehrtens, Henry George. Died in San Francisco, February 28, 1933, age 47 years. Graduate of Stanford University School of Medicine, San Francisco, 1913. Licensed in California, 1913. Doctor Mehrtens was a member of the San Francisco County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

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Wislocki, Eugene John. Died in San Jose, January 9, 1933, age 72 years. Graduate of Imperial University of Cracow, Poland, 1887. Licensed in California, 1891. Doctor Wislocki was a member of the Santa Clara County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

OBITUARIES

Henry George Mehrtens

On the morning of February 28 Dr. Henry G. Mehrtens passed from among us. His going came as a shock to many of his friends and acquaintances who were unaware that the illness which had confined him to bed for two weeks was of a serious nature. On February 14 he was stricken with coronary occlusion from which he was making a satisfactory recovery when, a week later, he suffered a further and fatal occlusion.

Doctor Mehrtens was born in November, 1885, in San Francisco, where he spent his boyhood and received his education preparatory to entering the University of California, from which he was graduated



Henry George Mehrtens
1885-1933

with the degree of B. S. in 1911. His medical course was interrupted for two years by a lung infection from which he, fortunately, recovered. Upon resuming his medical studies he chose to throw in his fortunes with the first class which was graduated from the Stanford Medical School, formerly Cooper Medical College. His class was graduated in 1913, and Doctor Mehrten's subsequent history is bound up closely with that of his alma mater, for he retained connection with the Stanford Medical School and Lane Hospital as house officer, house physician, assistant in neurology, associate professor, and, at his death, professor of medicine (neuropsychiatry). His long and close association with the medical school and hospital made him the logical successor to the deanship when Dr. William Ophüls retired from that position recently.

Doctor Mehrtens became a member of the San Francisco County Medical Society on April 4, 1916, and has been active in the affairs of the society continuously since then. His field of scientific endeavor was neuropsychiatry, in which he did considerable original work, especially in the treatment of neurovascular syphilis. His affability upon all occasions and toward all those with whom he came in contact, as well as his encouragement of those working with him, or under his direction, will make him remembered by many with whom he generously shared his experience and medical knowledge. The profession has suffered a real loss in the passing of Doctor Mehrtens, who was just past his forty-seventh birthday at the time of his death and at the height of a productive and useful career.

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Francis Frederick Knorp
1872-1933

Recently the many friends, both lay and professional, of Dr. Francis Frederick Knorp were profoundly shocked upon hearing of his sudden passing from heart disease.

Doctor Knorp was born in Suisun, California, on January 16, 1872, and spent his early life in that city. Later he came with his family to San Francisco and was educated in the public schools.

He was graduated from Cooper Medical College in 1892 and during 1893 served as intern at the San Francisco Hospital. After a short interval of country practice and a trip around the world as a ship's surgeon, he began his practice here in San Francisco.

He was an earnest student and that quality, coupled with great natural ability, eventually brought him into prominence in the local medical profession. He has been continuously connected with the College of Physicians and Surgeons since February 3, 1897, first as assistant demonstrator of anatomy, then as professor of anatomy, and for the last twenty years as professor of surgery. He was chief of staff of Saint Joseph's Hospital for many years, and up to the time of his passing was a member of the staff of Saint Mary's Hospital.

Socially and fraternally he was a member of the Olympic Club and an honorary member of the Psi Omega and Alpha Kappa Kappa fraternities. Professionally he was a member of the San Francisco County Medical Society, the California Medical Association, and the American Medical Association.

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George Howard Fay
1864-1933

Dr. George Howard Fay of Auburn, California, was born in Cedar Rapids, Iowa, June 7, 1864. He was graduated from Cooper Medical College in 1902, since which time he practiced continuously in Placer County. With the exception of two years at Forest Hill his entire professional life was spent in Auburn. For a number of years, in conjunction with the late Robert Fleming Rooney, Doctor Fay was county physician.

Doctor Fay had been a member of the Placer County Medical Society since its reorganization February 17, 1903. He served as secretary of the society during the years 1907-1908.

THE WOMAN'S AUXILIARY TO THE CALIFORNIA MEDICAL ASSOCIATION*

Component County Auxiliaries

San Bernardino.—The auxiliary to San Bernardino County Medical Association met at the home of Mrs. Carlos G. Hilliard, 534 Terracina Drive, Redlands. The invited guests were: Dr. F. B. Moore, president of the San Bernardino County Medical Association; Mrs. James F. Percy, Mrs. F. E. Coulter, and Mrs. A. W. Walker, president of the Riverside County Auxiliary. Mrs. Coulter gave a very concise and interesting talk on national, state, and county auxiliary work. An intermission for a social hour was enjoyed, and an opportunity given those present to become better acquainted. After tea, business was resumed, with Mrs. F. E. Clough, president, presiding. The postponed election resulted in the following officers for the year: Mrs. C. G. Hilliard of Redlands, president; Mrs. C. D. Dock of Redlands, vice-president; Mrs. W. P. Cherry of Rialto, second vice-president; Mrs. F. E. Clough of San Bernardino, secretary-treasurer. Plans were made for an early meeting in March, and for the State Board meeting at Los Angeles on Friday, February 17.

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Orange County.—The Woman's Auxiliary to the Orange County Medical Association will hold their April meeting on the fourth at the Ebell Club house in Santa Ana. This is to be a luncheon meeting honoring the state president, Mrs. F. E. Coulter. Other invited guests are the state officers and board members.

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San Joaquin County.—The annual meeting of the Woman's Auxiliary to the San Joaquin County Medical Society was held on March 2 at the home of the president, Mrs. P. B. Gallegos. Elsie E. Shirpser, Social Service worker, Jewish Committee of Personal Service, was the guest of honor and speaker. The officers were reelected for the coming year: President, Mrs. P. B. Gallegos; first vice-president, Mrs. G. E. Sanderson.

ELLA B. CONZELMANN, R. N.,
Secretary and Publicity Chairman.

* As county auxiliaries to the Woman's Auxiliary to the California Medical Association are formed, the names of their officers should be forwarded to Mrs. Clifford A. Wright, chairman of the Publicity and Publications Committee, 454 South Irving Boulevard, Los Angeles. Brief reports of county auxiliary meetings will be welcomed by Mrs. Wright, and must be sent to her before publication takes place in this column. For lists of state and county officers, see advertising page 6. The Council of the California Medical Association has instructed the editor to allocate one page in every issue for Woman's Auxiliary notes.

Santa Barbara.—The Woman's Auxiliary to the Santa Barbara County Medical Society met at the home of Mrs. Charles Sydney Stevens, 2325 Santa Barbara Street, at 8 p. m. on Monday, March 13. Fourteen members were present. Mrs. Rodney Atsatt, the president, presided. To consider the basis upon which to award prizes to the graduates of Saint Francis Training School and the Knopp College of Nursing, a committee of three, to be appointed by the president, was recommended. Mrs. Henderson moved that such committee be appointed. Mrs. Wilcox seconded the motion. Discussion over what would be the best time to award the cash prizes ensued, with opinions offered by Mrs. Friedell favoring the senior, and Mrs. Henderson stating reasons for which she preferred the junior year. Dr. Hugh Friedell spoke on the lawsuit concerning the General Hospital, from the legislative point of view. He interpreted the various bills in connection with it and explained the ultimate effect each would have on the present hospital administration. Mrs. Atsatt gave a short but illuminating report from the meeting of the State Board Auxiliary in Los Angeles in February. She brought back with her our constitution, with corrections, which has been ratified. The secretary, Mrs. Hunt, was instructed to write a letter to our state president, Mrs. Coulter, and the members of her Orange County Auxiliary expressing our sympathy in their recent disaster. The members spent the evening sewing upon Red Cross garments for which there is an immediate need in the earthquake area. Light refreshments were served by the hostess.

MRS. W. R. HUNT.

San Luis Obispo.—The Woman's Auxiliary to the San Luis Obispo County Medical Auxiliary met at dinner at the Hotel Andrews on February 27, with Mrs. Deon Crew presiding. A letter from Mrs. F. C. Coulter, state president, was read and its valuable contents noted and acted upon by the auxiliary. Mrs. Chester J. Teass, state treasurer, gave a report of the State Board meeting in Los Angeles, outlining in detail the duties of the publicity chairman. Arrangements are being made to contact the secretary of the San Luis Obispo County Society and get suggestions how the auxiliary may prove of service to the California State White House Conference on Child Welfare Protection. A prize is to be offered by the auxiliary in an essay contest in rural schools for the best paper of five hundred words. The subject will be chosen from the following list, after the approval of the San Luis Obispo County Medical Association Board: immigration, vaccination, communicable diseases, dental hygiene, tonsils and adenoids, posture, typhoid.

MRS. ALYNETTE BATEMAN.

Long Beach.—Through the enthusiastic coöperation of Dr. J. Rollin French and Mrs. James K. Lytle, over three hundred announcements detailing the splendid child's health program given during the recent meeting of the Western Hospital Association Convention at Long Beach were sent out to Parent-Teacher Association presidents of the tenth district.

Riverside.—Plans were launched by the Riverside County Medical Society recently at a joint meeting with the Woman's Auxiliary at the Mission Inn to bring the 1934 convention of the California Medical Association to Riverside. The meeting, which was preceded by a dinner, was presided over by the president, Dr. H. S. Faris. This dinner meeting was a gala occasion for the medical fraternity and the auxiliary. It was decided to extend an invitation to the convention when it meets at Del Monte in April, to hold the 1934 meeting in Riverside. Every effort will be made to induce the Association to select Riverside. The convention would bring from 1,200 to 1,500 visitors to the city. Dr. Bon O. Adams is president of the Southern California section. The chief speaker on the program was Dr. Joseph M. King, president of the State Association, who called attention to the bills in the legis-

lature that have to do with medical problems and public health, discussing them from the standpoint of the value they have to the public and taxpayer. Mrs. F. E. Coulter, president of the Woman's Auxiliary to the State Association, preceded Dr. King and spoke on what the auxiliary can do to help the Association. She congratulated the local auxiliary officers, headed by Mrs. A. W. Walker, on what they are doing in carrying out the objectives of their organization. Ben H. Read, executive secretary of the Public Health League of California, spoke briefly on the purpose of the league, which is "to unite in one group representatives of the numerous medical, dental, nursing, pharmaceutical, hospital and lay organizations which have a common interest in furthering the welfare of scientific care of the sick, preventing disease, and in reducing as much as possible the large and increasing expenditures of public funds for medical charity." Dr. W. W. Roblee delivered his rather humorous talk on *What Wives Should Know About Their Husbands' Business*. State Senator Leonard J. Difani, a special guest, spoke briefly on the problems of the legislature and the need of economy in lightening the burdens of the taxpayer. Dr. Alexander Barclay of Coeur d'Alene, Idaho, former president of the Idaho Medical Association, stressed the necessity of working out the economics of the medical profession. One of the pleasing diversions was a dance cleverly and artistically done by Maxine Thuresson. Frank Tavaglione sang two solos.

Los Angeles.—The Woman's Auxiliary to the California Medical Association met on February 21 for luncheon in the Solarium of the Ebell Club in Los Angeles. Mrs. A. Bennett Cooke, the new president, presided. Dr. Joseph M. King and Mrs. F. E. Coulter were honor guests, each speaking on a subject most interesting to the entire audience. Mrs. Philip S. Doane made one of her impromptu speeches for which she is famous. The crowd proved too large for the Solarium, and arrangements have been made to have the next meeting in the dining-room of the Ebell Club, in Los Angeles. The question of legislation was presented by Dr. Joseph M. King, and various bills before the legislature of interest to the medical profession were discussed in detail.

Mrs. James F. Percy, national president of the Woman's Auxiliary to the American Medical Association, entertained at luncheon at the Valley Hunt Club, in Pasadena, on March 15 in honor of Mrs. Rock Sleyster, Milwaukee, Wisconsin, and her sister, Mrs. H. E. Peacock of Chicago, Illinois. Mrs. Sleyster is national chairman of conventions of the Woman's Auxiliary. She told of the plans being made for the meeting in Milwaukee on June 11 to 16. Her gracious manner and splendid program made every woman anxious to attend.

* * *

Woman's Auxiliary to the American Medical Association

The eleventh annual meeting will be held at Milwaukee, Wisconsin, on June 12 to 16, with headquarters at Hotel Pfister, Milwaukee. All women attending this convention, whether auxiliary members or not, are invited to participate in this entire program.

The preliminary program follows:

Monday, June 12

- 12:30 p.m.—Luncheon at College Woman's Club in honor of past presidents, followed by National Board meeting and visit to American Medical Association exhibits at Auditorium. Tickets, \$1.
7:00 p.m.—Dinner for National Board, delegates, and wives of officers and delegates of the American Medical Association at Woman's Club of Wisconsin. Musical program furnished by artist members of the Auxiliary to the Medical Society of Milwaukee County. Tickets, \$1.25.

Tuesday, June 13

- 9:00 a.m.—General meeting, Roof Room, Hotel Pfister, Mrs. James F. Percy presiding.

- 12:30 p.m.—Luncheon and bridge at the Wisconsin Club. Tickets, \$1.25.
 2:00 p.m.—Attractions available for those not wishing to play bridge are: Layton Art Gallery, Milwaukee Art Institute, Milwaukee Museum, Curative Workshop, and Vocational School; or
 Bus trip to county institutions, Milwaukee Children's Hospital Convalescent Home, and Washington Park Zoo.
 8:00 p.m.—General meeting of the American Medical Association.
 10:00 p.m.—Informal dance at the Wisconsin Club. Courtesy of the State Medical Society of Wisconsin. Hostesses, Woman's Auxiliary to the State Medical Society of Wisconsin.

Wednesday, June 14

- 9:00 a.m.—General meeting, Roof Room, Hotel Pfister, Mrs. James F. Percy presiding.
 12:30 p.m.—Auxiliary luncheon, Fern Room, Hotel Pfister, guests and speakers from the American Medical Association. Musical program. Tickets, \$1.
 4:00 p.m.—Teas in private residences.
 8:30 p.m.—Light opera.

Thursday, June 15

- 9:00 a.m.—General Meeting, Roof Room, Hotel Pfister, Mrs. James Blake presiding.
 12:00 noon—Trip to Oconomowoc Lake district. Luncheon 12:30 p. m., Carnation Milk Plant, Oconomowoc, Wisconsin. Transportation and luncheon, courtesy of Carnation Milk Company.
 12:30 p.m.—Buffet luncheon, Crystal Room, Hotel Pfister. Tickets, 75 cents.
 2:00 p.m.—Sightseeing tour of Milwaukee.
 6:30 p.m.—"Bring Your Husband" dinner, Fern Room, Hotel Pfister. International-House-Cabaret. Tickets, \$1.50.
 9:00 p.m.—President's reception and ball, Schroeder Hotel. Hosts, The American Medical Association.

Friday, June 16

- 10:00 a.m.—Golf Tournament.

Mrs. ROCK SLEYSER, *General Chairman*.
 Wauwatosa, Wisconsin.

NEVADA STATE MEDICAL ASSOCIATION

O. HOVENDEN, McGillPresident
 D. A. SMITH, Mina.....President-Elect
 J. N. VAN METER, Las VegasFirst Vice-President
 FLEET H. HARRISON, Minden.....Second Vice-President
 HORACE J. BROWN.....Secretary

COMPONENT COUNTY MEDICAL SOCIETIES

WASHOE COUNTY

The Washoe County Medical Society held its monthly meeting on Tuesday, March 14, at 8 p. m. in the Nevada State Building. Having a lengthy program in view, the minutes were accepted without reading and the society turned its attention to a series of resolutions introduced by Doctor Servoss. The ultimate result was that after motion, properly seconded, the society instructed the secretary, in view of the prevailing condition of times, to refund all dues that had been paid in so far this year and to send paid-up cards for the remaining members for the year 1933.

The society then proceeded to consider its program. The first part of the program was the cinema, *The Forceps Operation*, a four-reel movie furnished by the Chicago Lying-In Hospital, produced by Dr. J. B. DeLee. Then came a movie furnished by the Davis & Geck Company, suture manufacturers of Brooklyn, New York, on *Colporrhaphy for Third-Degree Lacerations*. The pictures having been exhibited, the following brief papers were read: *What Is Understood by*

Normal Labor, Dr. Fleet Harrison, Minden; *Management of Breech Cases*, Dr. T. H. Harper, Reno; *Forceps in Labor and When Indicated*, Dr. S. K. Morrison, Reno; *Eclampsia—Pathology and Treatment*, Dr. H. A. Paradis, Sparks. The pictures and the papers fitted well into each other to make a completed program. The papers were all by veteran physicians in medicine and were full of the latest theories, with reference to the special cases. They were also interspersed with plenty of practical comments and suggestions derived from practical experience. Dr. Horace J. Brown led the discussion, and was followed by many of the members present in elaborating details in the treatment of obstetric cases, likewise, in the treatment of eclampsia. The progress of the art of obstetrics with reference to blood chemistry, blood pressure, and the measurement of the pelvis by means of not only the pelvimeter, but visualization by measured films of the x-ray to determine pelvic diameters and the relative proportion of the passenger to the pelvis were gone into in detail.

The thanks of the society was expressed to the makers of the films. This new departure in teaching by the actual picture is now such a standard part of medical and surgical education that it would appear programs for every medical meeting should be exhibited, not only as an extra inducement to bring out the indifferent member, but for the sake of the mental impression which visualization produces.

THOMAS W. BATH, *Secretary*.

Hope for Eradication.—"One has only to look back across the years of the first quarter of this century to be impressed with the progress made against syphilis and gonococcus infections. It is probable that the protection of the eye from the ravages of these diseases will rank first in the advances of the next decade. The freeing of prenatal life from them will rank as a close second in the list of achievements. The joining of medical and social forces in a successful drive against these diseases in family life is destined to rank high. Industrial measures may be expected to follow the encouraging examples of the Army and Navy Medical Corps in dealing frankly and effectively with these problems. By such processes of attrition it might be forecast that the accessible and susceptible victims of the 'great imitator' or 'killer'—syphilis, and the 'great sterilizer'—gonorrhea, may be reduced gradually to those migratory, promiscuous, careless individuals who have no homes, are not employed, and do not produce children. There is much to support the view that these diseases, like some others, may be reduced to a point in prevalence below which they cannot maintain themselves in the community and accordingly begin to die out."—William F. Snow, M. D., formerly secretary California State Board of Health.

Hinton Test in Diagnosis of Syphilis.—Wiestling and Berk state that, in the penal institutions of Massachusetts, the Wassermann test is the one officially used as an aid in the diagnosis and management of syphilis. In November, 1929, the Hinton test was instituted, in addition to the Wassermann test, as a means of serologic diagnosis. During the succeeding eighteen months, 389 women were examined, of whom 139, or 35.7 per cent, showed positive reactions at one time or another, or gave a history of syphilis or presented clinical signs or symptoms of the disease. Both Wassermann and Hinton tests were done on the same specimen of blood. From the comparison of the results obtained, the authors conclude that the Hinton test was positive in more than twice as many cases of syphilis as the Wassermann and therefore is a distinct aid in the diagnosis of syphilis. In treated cases the Hinton reaction remained positive longer than the Wassermann, indicating, as far as they could determine, continuation of treatment and therefore better management. They believe that a negative Hinton reaction may be considered a diagnostic aid in ruling out active syphilis of the central nervous system whenever suspicious signs are encountered.—*New England Journal of Medicine*.

MISCELLANY

Under this department are ordinarily grouped: News; Medical Economics; Correspondence; Twenty-five Years Ago column; Department of Public Health; California Board of Medical Examiners; and other columns as occasion may warrant. Items for the News column must be furnished by the fifteenth of the preceding month. For Book Reviews, see index on the front cover, under Miscellany.

NEWS

Coming Meetings—

American Medical Association, Milwaukee, Wisconsin, June 12 to 16, Olin West, M. D., 535 North Dearborn Street, Chicago, Secretary.

American Association for Study of Goiter, Memphis, Tennessee, May 15 to 17, R. J. Yung, M. D., Terre Haute, Indiana, Secretary.

American Surgical Association, Washington, D. C., May 1 to 3, Vernon C. David, M. D., 59 East Madison Street, Chicago, Secretary.

Arizona State Medical Association, Tucson, April 20 to 22, D. F. Harbridge, M. D., 822 Professional Building, Phoenix, Secretary.

California Medical Association, Del Monte, April 24 to 27, Emma W. Pope, M. D., 450 Sutter Street, San Francisco, Secretary.

Southern California Medical Association, Pasadena, April 7 and 8, Robert W. Langley, 1930 Wilshire Boulevard, Los Angeles, Secretary.

Western Branch of the American Urological Association, Vancouver, B. C., August 3 to 5, George W. Hartman, M. D., Secretary.

Medical Broadcasts*—

American Medical Association Health Talks.—The American Medical Association broadcasts on Monday and Wednesday from 9:45 to 9:50 a. m. (central standard time) over station WBBM (770 kilocycles, or 389.4 meters).

There is also a fifteen-minute talk, sponsored by the association, on Saturday morning from 9:45 to 10 over station WBBM.

San Francisco County Medical Society.—The San Francisco County Medical Society broadcasts every Tuesday from station KFRC, 4 to 4:15 p. m., and over station KJBS from 11:15 to 11:30 a. m.

Los Angeles County Medical Association.—The radio broadcast program for the Los Angeles County Medical Association for the month of April is as follows:

Tuesday, April 4—KFI, 10:15 to 10:30 a. m., and KECA, 9:45 to 10 a. m. Subject: Change of Climate.

Tuesday, April 11—KFI, 10:15 to 10:30 a. m., and KECA, 9:45 to 10 a. m. Subject: Children and Wholesome Food.

Tuesday, April 18—KFI, 10:15 to 10:30 a. m., and KECA, 9:45 to 10 a. m. Subject: The Ills of Middle Age.

Tuesday, April 25—KFI, 10:15 to 10:30 a. m., and KECA, 9:45 to 10 a. m. Subject: What About Tuberculosis?

The Howard Estill Memorial Chemical Library.—

In memory of the late Dr. Howard W. Estill, assistant professor of bacteriology at the University of California Medical School, Mrs. Howard (Nina Simmonds) Estill has deposited in the library of the University of California Medical School and the San Francisco branch of the State Medical Library the chemical library belonging to Doctor Estill. This library, numbering some 150 volumes, is especially strong in monographs and reference volumes relating to organic, physical, and colloid chemistry as applied to biology and medicine.

* County societies giving medical broadcasts are requested to send information as soon as arranged (giving station, day, date and hour, and subject) to CALIFORNIA AND WESTERN MEDICINE, 450 Sutter Street, San Francisco, for inclusion in this column.

American College of Surgeons—Postponed Los Angeles Meeting.—In the last issue of CALIFORNIA AND WESTERN MEDICINE was printed a preliminary notice of a session of the California-Nevada section that was to have been held at Los Angeles on April 3 and 4. Under date of March 11, the director general, Dr. Franklin H. Martin, sent out the following explanatory notice concerning the cancellation:

"Plans were largely perfected for a group of sectional meetings of the college to be held in Phoenix, Los Angeles, Spokane, and Salt Lake City between March 27 and April 18. Committees of the Fellows were working enthusiastically over local arrangements, and a distinguished group of visiting speakers had accepted invitations to participate in the meetings.

"The present national emergency, with its financial embarrassments and all of its local and general effects, has impelled the Executive Committee of the college to decide on cancellation of these meetings for the present. Attendance at the meetings under present conditions might well be impossible for some of the Fellows, and the necessary outlay of each of the visiting speakers, all of whom pay their own expenses, would be rather a large one to expect them to make at this time.

"I am sure you will recognize it was only after full consideration of all of the happenings of the past few days that the decision was made to postpone these meetings at a time when preparations for them were in the advanced stage which they had reached. Future plans are, of course, held in abeyance."

Display of Ophthalmoscopes.—Dr. Frederick C. Cordes of the department of ophthalmology at the University of California Medical School has made a unique collection of ophthalmoscopes and has deposited it for display in the museum of the University of California Medical School. Some fifty different examples of various types of these important instruments are on exhibit with descriptive information relating to their development from the earliest model employed by Helmholtz to the most recent designs. Ophthalmologists from all over the world contributed old and rare instruments to this collection.

Guity's Play, "Pasteur," Produced at the University of California Medical School.—Under the Direction of Dr. S. V. Larkey, assistant professor of the history of medicine at the University of California Medical School, two performances were recently given of an adaptation of Sacha Guity's famous play, "Pasteur." The first performance, which was given for the benefit of the Nurses' Fund of the University of California Hospital, was so successful that it was repeated in order that the staff and student body might have an opportunity to enjoy it. At the second performance, February 27, Dr. K. F. Meyer talked on Pasteur's work on rabies and showed striking moving-picture films which indicated the characteristic effects of the disease in man and animals. Methods of prevention and treatment were discussed by Doctor Meyer, and emphasis was placed upon the need of animal experimentation in connection with the control of this and related virus diseases. In the play, dramatic presentation was made of Pasteur's first inoculation in man for the treatment of rabies. The cast included Dr. Harold Lindner, Dr. Gordon Mannerstedt, Dr. S. P. Lucia, and Farnum and William J. Kerr, Jr. The part of Pasteur was taken by Professor C. D. Leake.

Doctor Rosenau of Harvard to Conduct University of California Courses.—Dr. Milton J. Rosenau, professor of preventive medicine and hygiene of the Harvard Medical School and professor of epidemiology at Harvard, will give two courses at this summer session of the University of California at Berkeley. One of these is on elementary epidemiology, the evolution of methods of disease prevention and control based on studies of the history, prevalence, etiology, sources and modes of infection of the principal preventable diseases; the other course, elementary public health, will cover a general survey of the field of public health in the United States, including a consideration of the causes of death, sickness and disability, the conservation of infant and child health, the home and the industrial environment, the noncommunicable diseases, and the presentation of health instruction.

Summer Courses for Graduates in Medicine.—The University of California Medical School offers a series of summer courses to be held on June 5 to June 17. Several clinical branches will be given in the morning and afternoon courses. The following subjects are offered: general medicine, general surgery, otorhinolaryngology, genito-urinary diseases, pediatrics, circulatory diseases, diseases of the blood-forming organs, diseases of the endocrine glands (including diabetes), and diseases of the gastro-intestinal tract, laboratory diagnosis, pathology, and operative technique.

In addition to the regular courses, there will be daily noon lectures and clinico-pathological conferences and round-table discussions on various subjects on three evenings each week. The lectures, conferences, and round-table discussions will be open to the medical public without charge.

The announcement of courses will be ready about May 1, and will be mailed on request. Please address: The Dean's Office, University of California Medical School, Parnassus and Third Avenues, San Francisco.

Southern California Medical Association Pasadena Meeting.—The Southern California Medical Association will meet at the Hotel Huntington, Pasadena, April 7 and 8. Following is the program:

The Cause of Death in Consumptives. By Emil Bogen, M. D., Olive View Sanatorium, San Fernando.

Internal Hemorrhoids—Comparable Results of Treatment by Operative and Injection Methods—A Survey of Sixty Thousand Cases. By Norman J. Kilbourne, M. D., Los Angeles.

Functional Dyspepsia. By Markley C. Cameron, M. D., Los Angeles.

The Relation of Vitamin B Deficiency to Metabolic Disturbances During Pregnancy and Lactation. By Earl M. Tarr, M. D., Los Angeles.

The Treatment of Acute Intestinal Obstruction. By George K. Brown, M. D., Pomona.

The Acid-Base Equilibrium. By Samuel Alter, M. D., Los Angeles.

Curability of Cancer by the Combined Methods of Irradiation and Surgery. By George S. Sharp, M. D., Pasadena.

Treatment of Bronchial Asthma with Physiotherapy. By Neville T. Ussher, M. D., Santa Barbara.

Symposium on Thermo-therapy: (a) Physiopathology of Fever. By Douglas R. Drury, M. D., Los Angeles.

Results of Plasmotherapy; Hydrotherapy and Diathermy. By John Van Paing, M. D., Santa Barbara.

Indications for the Use of Thermo-therapy. By Ross Moore, M. D., Los Angeles.

Cavities in Pulmonary Tuberculosis—Their Significance, Prognosis, and Treatment. By Carl R. Howson, M. D., Los Angeles.

Reconstruction of the Burned Face (A moving-picture demonstration). By Howard L. Updegraff, M. D., Los Angeles.

Medical Women's National Association.—The next session will be held in New York, with the Hotel Astor as headquarters, during the period June 11 to 16.

All women physicians are invited to all sessions of the Medical Women's National Association. An excellent program has been arranged.

American Association for the Study of Goiter.—The next meeting will be held at Memphis, Tennessee, on May 15, 16, and 17, with headquarters at the Peabody Hotel.

The list of speakers at this meeting include many physicians of national reputation. Members of the profession in good standing are cordially invited to attend this meeting. They are also urged to join a special group sailing from New York City, July 26, to attend the International Goiter Conference to be held in Berne, Switzerland, August 10, 11, and 12. Special rates have been provided, and daily programs arranged while en route to Le Havre. Those who are interested should communicate with J. R. Yung, M. D., corresponding secretary, Terre Haute, Indiana, or S. D. Van Meter, M. D., chairman, Denver, Colorado.

Pacific Coast Surgical Association.—The Pacific Coast Surgical Association held its eighth annual meeting on February 23 to 25 at Del Monte.

The officers elected for the ensuing year were: President, Ernst A. Sommer of Portland, Oregon; first vice-president, Thomas M. Joyce of Portland, Oregon; second vice-president, Sumner Everingham of Oakland; secretary-treasurer, Edgar L. Gilcreest of San Francisco.

The Council consists of the following Fellows: Drs. Emmet Rixford, San Francisco; George W. Swift, Seattle, Washington; Rexwald Brown, Santa Barbara; Joseph K. Swindt, Pomona; and Howard C. Naffziger, San Francisco.

The association will meet next year in Portland, Oregon, the last week-end in February.

Western Division, American Congress of Physical Therapy—Del Monte Meeting.—The American Congress of Physical Therapy, recently affiliated with the American Physical Therapy Society, retaining the former name intact. This is the only national body of physicians interested in the advancement and practice of rational physical medicine.

They recently decided on the policy of four national divisions, each division to have a one-day meeting in April, in the city convenient to members of that locality. Dr. John S. Hibben of Pasadena has been named secretary and Harold M. F. Behneman, chairman of the Western Division, which will meet at Del Monte the afternoon preceding the state medical meeting on April 23, starting at 1:30 p. m. in the Tower Room of the hotel. Speakers will be recognized workers on the Pacific Coast, and those residing in this state are members of the state medical society.

French Hospital Residents and Interns' Alumni Association.—On October 20, 1932, a group of physicians who were former interns or residents of the French Hospital of San Francisco organized into a society known as "The French Hospital Residents and Interns' Alumni Association."

The objects of the organization, briefly stated, are as follows:

1. To promote and develop the science and art of medicine.
2. To cultivate a greater fraternal and professional relationship with our staff and members.
3. To encourage the intern staff, and to further the interest in the French Hospital.

To date there are over thirty-five active members in San Francisco and its vicinity. Many of the prospective members are scattered throughout California and the United States.

Regular monthly dinner meetings are held on the third Friday of each month which are social and scientific in nature.

The officers for the current year are: President, Coleman Block; vice-president, J. L. McClure; secretary-treasurer, Joseph J. Jacobs.

CORRESPONDENCE

Subject of Following Letters: Reports by Health Officers of Long Beach and Los Angeles on Medical Service in the Recent Southern California Earthquake.

Department of Health
City of Long Beach

To the Editor:—Your favor of the 17th inst. just came to my attention, and this being Sunday I have no stenographer at work and will have to answer in longhand.

The State Board of Health and their representatives have and are still rendering invaluable service to us in the stricken area. They are functioning 100 per cent, and we are hoping the State Board will let them remain as long as there is any necessity for their services.

I can find no words to express our appreciation of the valuable service the State Health Board representatives are rendering.

G. E. McDONALD, M. D.,
Health Officer, City of Long Beach.

Department of Health
City of Los Angeles

To the Editor:—Answering your inquiry of March 17, I am happy to state that Dr. Giles S. Porter, the State Health Officer, his assistant, Dr. Telfer, Mr. Ross, Chief Sanitary Inspector, and Sanitary Engineer, Mr. Gillespie, and Mr. Harmon, all of the State Health Department, gave valued assistance and advice in handling the emergency conditions in the devastated area. Mr. Ross continued in active direction of sanitary inspection from the time he reported on Saturday, March 11. My own and other health departments who contributed sanitary personnel placed them under control of Mr. Ross.

The Emergency Committee that was appointed designated Mr. C. S. Henderson as director of relief in the devastated area. Mr. Henderson appointed me as director or coördinator of emergency medical relief. He appointed Doctor Porter, coördinator of public health. This latter appointment perhaps was superfluous, as it was well within the legal powers of state health officer. Colonel O. C. Wyman, a quartermaster officer of this city, was made director or coördinator of food supplies. These several responsibilities delegated by Mr. Henderson enabled us to work in complete coöperation and, I believe, contributed much to the orderly program of relief that was carried on through the week's emergency. I cannot speak too highly of all those who contributed so generously to my division of medical relief. More than two hundred doctors reported, coming from as far as Santa Barbara, San Bernardino, and San Diego. We had on duty daily a little less than one hundred physicians at the fourteen relief stations and the two hospitals in Long Beach City. Although more than six hundred nurses volunteered, approximately two hundred were on duty daily. I am proud of the way the medical and nursing professions came to the aid of the people in the stricken area.

C. W. DECKER,
Health Officer, City of Los Angeles.

Subject of the Following Letter: Misrepresentation by an Insurance Solicitor.

To the Editor:—A man representing himself as J. F. Anderson, but whose true name we have since learned is Fred Hernbloom, and who has another alias, J. F. Palmer, procured some of our literature and specializes in calling on doctors.

It has been reported to us that he has procured considerable money from doctors and dentists on applications for life insurance. No applications for life insurance are received by us, and the only way we have learned of his practice is through complaints being made to our home office or to my office. He is operating in Southern California.

I went to Los Angeles and spent considerable time there trying to find him. I reported the facts to the Life Underwriters' Association in Los Angeles, to the Better Business Bureau, who made notations and stated they would communicate the facts to their membership, and also to the Los Angeles Police Department through Mr. T. J. Ryan of the Bunko Detail, who will be on the lookout for this man. I contacted the Medical Association in Los Angeles, and they are publishing a warning in their bulletin.

It was suggested by doctors in Los Angeles that you publish a warning through your publication here in San Francisco, warning all doctors and dentists to be on the lookout for this man and under no circumstances to pay any money to anyone without his showing to them that he is authorized by the State of California to write life insurance; in other words, to practice the business of a life insurance underwriter.

This man has no license to represent any life insurance company in California. He never has had a license or contract to represent the Guarantee Mutual in California.

G. G. RIPLEY,
1114 Russ Building.
San Francisco.

Subject of Following Letter: The Majority and Minority Reports on the "Final Report of the Committee on the Costs of Medical Care."

To the Editor:—The University of Chicago Press has recently published the report of the Committee on the Costs of Medical Care, under the title of "Medical Care for the American People." The price is \$2. In many medical journals, I have noticed comments on the committee's report, but with little reference to the minority report. In the volume referred to, the minority report is given in full and is so wise and so reasonable that anyone interested in the subject should read it. The *Journal of the American Medical Association* and *CALIFORNIA AND WESTERN MEDICINE* in its December number printed excerpts. The minority report gives the most conclusive refutation I have seen of the assumed facts and of the fallacies of the majority report. It should appeal to all except professional socialists. Indeed, the basis of the majority report seems to be the spirit of socialism rampant in our universities. The adoption of the recommendations of the majority report by the profession would be an entering wedge to state socialism. I wish to emphasize the advisability of a perusal of this volume by all California Medical Association members who are interested in these matters.

JOHN C. KING.

EDITOR'S NOTE.—The above letter is from Dr. John C. King, formerly in practice in Banning, now retired and living at Pasadena. Doctor King was president of the California Medical Association in 1910-1911. Summaries of the reports above referred to were printed in the December, 1932, *CALIFORNIA AND WESTERN MEDICINE*, pages 395-400. County societies and interested members were urged to purchase the Final Report, the following footnote being appended:

Publication 28: "The Final Report of the Committee on Costs of Medical Care" may be purchased from the University of Chicago Press, Chicago, Illinois. Price, \$1.50.

MUSSEL AND CLAM POISONING IN CALIFORNIA

In 1930 there was but one case of mussel poisoning reported in California and in 1931 but two cases. In 1932 forty-two cases of the disease were reported. This is distinctly at variance with the preceding year 1929, when fifty-five cases occurred. In 1927, an outbreak of more than one hundred cases, with several deaths, constituted almost a catastrophe. Each year, in fact, since 1927 the California Board of Public Health has established a quarantine on mussels during the summer months, when these shellfish are toxic. Recently a similar quarantine has been placed upon clams because of the toxic condition that has been discovered in them. Through the coöperation of Dr. K. F. Meyer, director of the Hooper Foundation for

Medical Research, investigations into clam and mussel poisoning have been carried on each year. It has been determined that these shellfish become toxic during the spring months, reaching a high state of toxicity during midsummer and becoming nontoxic during the winter months. There is a variation in the time at which the peak of toxicity is reached, but it generally occurs about the middle of July. The quarantine area covers the coastal district from Monterey County to the Klamath River in Del Norte County. Within this area the sale or offering for sale of clams and mussels is prohibited during the summer season, the quarantine each year terminating September 30.

While few cases were reported in 1930 and 1931, laboratory tests performed during both of these years showed a remarkable toxicity to animals. During the season of 1932, the concentration of poison injurious for consumption by human beings was determined for the first time with sufficient certainty. A discovery of the Hooper Foundation for Medical Research, however, proving the value of bicarbonate of soda in the prevention of mussel poisoning, promises to have a distinct effect in shortening the quarantine period to cover only the time when the highest toxicity prevails. It has been determined that the addition of one-quarter ounce of bicarbonate of soda to each quart of water in which shellfish are cooked destroys 85 per cent of the poison when the cooking process is continued for twenty to thirty minutes. This procedure does not grant complete protection, but it provides partial protection. The coagulating protein substances retain about 15 per cent of the poison in the tissue of the shellfish, which is only delivered by digestion in the stomach.

It would seem that if this method of cooking mussels becomes universal, quarantine measures may be restricted greatly. It has developed, also, that while clams may be just as toxic as mussels, fewer cases of poisoning occur in human beings who eat clams for the reason that the intestines of the clams are generally discarded. The clam being larger, the intestines can be removed more easily than in the smaller mussels. Since most of the poison is found in the intestines of the shellfish, it is obvious that clam poisoning for this reason is not of as frequent occurrence. As a result of these discoveries it becomes apparent that if mussels are properly cooked with bicarbonate of soda and if the intestines of clams are always removed and the remainder thoroughly cleaned, it is possible that the danger of shellfish poisoning on the Pacific Coast could be reduced greatly, if not entirely eliminated.

MEDICINAL LIQUOR—FEDERAL LEGISLATION

Liquor Bill Approved.—One of the major recommendations of the Wickersham Commission and the objective of a prolonged campaign by the medical profession became an actuality on March 30 when the House approved, 153 to 59, the Copeland-Celler bill removing restrictions from medicinal use of vinous and spirituous liquors.

The measure does not actually "lift the lid" on prescription of wines, whiskies, and other alcoholic beverages as medicinal remedies, and close governmental supervision will be continued to prevent abuses.

Drafting of new regulations for medicinal liquor has been started, but officials declined to state the nature of restrictions under consideration.

The effect of the measure is to remove present statutory limitations which prevent physicians prescribing more than one pint of liquor every ten days for a patient or to give more than one hundred prescriptions every three months.

Fearing that the new law will be misunderstood and its provisions abused, the American Medical Association, in expressing gratification over passage of the bill, disclosed its desire that "safeguards" be continued to prevent abuse of the greater freedom granted medicinal men.—Los Angeles *Times*.

Medicinal Liquor Law Signed by Roosevelt.—On March 30 President Roosevelt signed the Copeland-Celler medicinal liquor bill removing restrictions on the amount doctors may prescribe.

The bill accomplishes three main things—allows patients to obtain whatever liquor is medicinally necessary; insures patients secrecy concerning their ailments, and, by simplifying prescriptions, saves the government \$110,000 annually.

The only limitation upon doctors is that "no more liquor shall be prescribed to any person than is necessary to supply his medicinal needs."—Los Angeles *Herald-Express*.

Doctor's Dilemma Ended.—In removing the restrictions on the amount of liquor physicians may prescribe for medicinal purposes Congress not only cancels a long-standing insult to the medical profession, but absolves itself from the charge of practicing medicine without a license and without the necessary educational qualifications. No longer will it stand between the doctor and his patient and say what may and may not be done to save the patient's life. It was a false position in that it permitted congressmen to deny a sick man or woman what they did not think of denying themselves. Another bit of Volsteadian humbug has been abandoned.—Editorial in Los Angeles *Examiner*.

BOTULISM DANGER IN HOME-CANNED PRODUCTS

At this season of the year housewives are drawing heavily upon stocks of canned goods to supply the family table and, if home-canned vegetables that have not been packed properly are eaten, there is a grave danger of contracting botulism—a severe and often fatal disease. Recently six cases of this disease, all of which were probably due to the use of home-canned products, have been reported in California.

Unless the housewife uses a pressure cooker for canning vegetables in the home, she is not able to cook the products at a sufficiently high temperature and with sufficient heat penetration to sterilize the entire contents of the containers.

The organism that causes botulism occurs in the soil and it is extremely resistant. It belongs to a group of organisms which may thrive in the absence of light and air. Most common pathogenic organisms require opposite conditions for their growth, but the botulinus bacillus is not one of these. Powerful poisons are developed in the process of growth and if taken even in the most minute quantity they may cause death.

Strange to relate, improperly home-packed vegetables may show no signs of spoilage but nevertheless they may harbor this deadly poison. To be safe, vegetables canned by ordinary methods in the home should be thoroughly boiled after removal from the can, for at least thirty minutes before serving. This will generally destroy the poison, but it is safer to eat commercially packed products or those which have been cooked in a pressure cooker in the home.

Commercial canners of vegetable and meat products are required to heat such products at specified high temperatures and for required lengths of time under regulations enforced by the California Department of Public Health. Since the enforcement of these regulations began in 1925, no cases of botulism have occurred from the use of products packed commercially in California.

The whole matter of prevention in this case rests upon the application of high temperatures and with heat penetration to the entire contents of the can. Unfortunately, the housewife generally lacks the machinery necessary in this process and in her sincere efforts to conserve the family food supply fatal results not infrequently follow.

FOOD FOR HEALTH *

"What we eat has a great deal to do with what we are. Many recent discussions of what we should eat have rightly emphasized the 'protective foods' which authorities on nutrition agree are essential, if health is to be maintained.

Milk and eggs, vegetables and fruits, bread and cereals, fats and sugar, meat and fish are, all of them, necessary kinds of food.

A wholesome, inexpensive, yet an adequate diet, can be provided if we understand and use a few fundamental principles in the selection of it. First, we must know how much of each kind of food is needed. This should be decided by the age and activity of the individual. Second, we must know which foods are most appetizing, yet inexpensive. For without this element of appeal to the palate any dietary is likely to be ineffective. Lastly, variety is the spice of life. This important element must never be overlooked. The problem is to get variety and still not overlook the essential elements for growth and development.

Public welfare officials are making every effort to provide adequate food for families under their care. Their problem is to keep the cost at the lowest possible amount consistent with the requirements of adequate food allowances.

Many parents in families *not* receiving public relief are likewise interested in this same problem.

At the request of the temporary Emergency Relief Administration of New York State, experts on nutrition have prepared and published standard food allowances for families of different sizes. These experts in the field of nutrition agree that it is important for the health of the family to provide the following amounts of food for each individual:

1. *Milk*.—One quart of milk should be allowed daily for each child under sixteen years of age, for each undernourished adult and for each nursing mother or pregnant woman. One pint of milk should be allowed for each other member of the family. This amount includes milk drunk and used in cooked foods. It may be fresh milk, preferably pasteurized, or unsweetened evaporated or dried milk, depending on local prices and conditions. (One tall can of unsweetened evaporated milk is equal in food value to one quart of pasteurized fresh milk.) Under any and all circumstances, at least one pint of milk a day should be provided for each individual in the family.

2. *Vegetables and Fruits*.—Vegetables and fruits are essential for health. A safe allowance provides at least six pounds of vegetables per person weekly. This allowance should include at least three pounds of potatoes and some cabbage, the remainder being chosen from vegetables and fruits listed in food orders. In addition, not less than one-half can of tomatoes and one-half to three-fourths of a pound of dried beans, peas, or dried fruit should be allowed per person, each week.

3. *Bread and Cereals*.—Four to five pounds of bread and cereals should be allowed per person each week, including some whole wheat bread and some whole grain cereal, such as oatmeal.

4. *Fats and Sugars*.—One-half to three-fourths of a pound of fat and not over three-fourths of a pound of sugar or its equivalent in other sweetening should be allowed for each person each week.

5. *Eggs and Meat*.—This allowance should include at least three eggs per week for each child under six years of age. When eggs are inexpensive, they should be provided liberally, but no child under six should have more than one egg daily.

The allowance should include at least one pound of inexpensive meat or fish and a small amount of cheese per person a week.

6. *Sundries*.—In addition, an allowance should be included for sundries. These should include seasonings, cocoa, tea and coffee.

* From the New York State Department of Health.

7. *Cod-Liver Oil*.—Authorities on nutrition recommend cod-liver oil should be included in the diet of all children under two years of age and that it should be given to all young children who are not well nourished.

A practical trial of the standard food allowances recommended has determined that food, sufficient to provide attractive, as well as filling meals for two persons, cost at current retail prices, \$3.30 per week in New York State.

TWENTY-FIVE YEARS AGO *

EXCERPTS FROM OUR STATE MEDICAL JOURNAL

Vol. VI, No. 4, April, 1908

From some editorial notes:

A Good Program.—The completed program of the coming meeting of the state society, which will be held at Coronado, April 21, 22, and 23, will be found on another page and is worth your careful consideration; it offers subjects of great and general interest presented by many men whose words will command the respectful attention of all. . . .

Sanitation or Politics?—If the first thought in the mind of everyone connected with the city administration, from the mayor down, is "politics," "how will this affect votes?"—what hope is there for a proper administration of the sanitary laws of the city and the ultimate eradication of plague? Can you see very much hope? . . .

Program of the Thirty-Eighth Annual Meeting.—Below is given the program of the thirty-eighth annual meeting of the Medical Society of the State of California. . . .

Tuesday, April 21, 1908

Morning Session—9:30

Address of welcome by the chairman of the Committee of Arrangements, Dr. F. R. Burnham, San Diego.

1. Dr. George H. Evans, San Francisco.
"President's Address."
2. Dr. William B. Wherry, San Francisco.
"The Pathology and Bacteriology of Plague."
Demonstration of specimens.
3. Dr. Rupert Blue, United States Marine Hospital Service.
"The Eradication of Plague."
4. Dr. F. M. Pottenger, Monrovia.
"Fourth Annual Report from the Committee on Tuberculosis."
5. Dr. Dudley Tait, San Francisco.
"First Annual Report from the Committee on Medical Education."
- 5a. Dr. Lincoln Cothran, San Jose.
"Annual Report from the Board of Medical Examiners."

Symposium on Pure Food

6. Dr. Fitch C. E. Mattison, Pasadena.
"First Annual Report from the Pure Food Commission."
7. Dr. Titian J. Coffey, Los Angeles.
"The Tenement House Problem."
8. Dr. George H. Kress, Los Angeles.
"The Pure Milk Question. (a) Inspected Dairies. (b) Certified Dairies."
9. Dr. Stanley P. Black, Pasadena.
"Meats, Fruits, and Vegetables."
10. Dr. Luther M. Powers, Los Angeles.
"Bakeries and Restaurants."
11. Dr. William Freeman Snow, Palo Alto.
"Water Supplies."

* This column strives to mirror the work and aims of colleagues who bore the brunt of society work some twenty-five years ago. It is hoped that such presentation will be of interest to both old and recent members.

Plague.—The *Military Surgeon* for March contains a very interesting article on "Plague in India" by Major Arthur Henry Moorehead of the Indian Medical Service. . . .

The annual mortality from plague in India since 1896 has been as follows:

1,704 (1896)	577,000 (1902)
56,000 (1897)	851,000 (1903)
118,000 (1898)	1,022,000 (1904)
135,000 (1899)	951,000 (1905)
93,000 (1900)	332,000 (1906)
274,000 (1901)	

A new suggestion, I believe of the Salvation Army, is to import a shipload of cats to India to kill rats.

From an article on "Some Points on the Symptoms and Localization of Intestinal Obstruction Due to Carcinomata, with Report on Four Cases" by Ray Lyman Wilbur, M. D., Stanford University.

In presenting the record of these cases, and the pathological specimens obtained from them, it is my intention to touch only upon the features of each that seem pertinent to diagnosis. They all offer, at some stage, symptoms of partial occlusion of the lumen of the intestine. . . .

From an article on "Impressions of the Killian Clinic" by Charles G. Levison, M. D., San Francisco.

My visit to the Killian clinic was made for the purpose of familiarizing myself with the technique of bronchoscopy, and no time was lost in getting to work. . . .

The course on bronchoscopy is given by Doctor Bruennings, Killian's first assistant, and he is entitled to more than a passing mention, for it is to him all the credit is due for the recent modifications of the Killian equipment. . . .

From an article on "Bronchoscopy" by E. C. Sewell, M. D., San Francisco.

As the instruments used in bronchoscopy and esophagoscopy and the technique of their use have been ably described this evening, I wish to speak upon the value of the method as a means of diagnosis, and also to call attention to the diagnostic features, which should lead us to consider the use of them necessary. . . .

From an article on "Indications for Operations on the Stomach" by Wallace I. Terry, M. D., San Francisco.

Within the past few years many articles have appeared in the literature on the surgery of the stomach, but the subject is such an important one that I felt it might not be amiss to consider a few phases of it and more particularly the indications for operative measures.

From an article on "Our Lack of Business Methods" by K. C. Park, M. D., San Jose.

It is a notorious fact that physicians are known as poor business men, and we have justly earned the title. If men in the mercantile business tended their affairs and made as little of business opportunities as the physicians do of the opportunities that surround them, it would not take long for their fellow merchants to make comments on their lack of sagacity in the business world.

County Societies:

San Francisco County.—Dr. Philip Mills Jones discussing paper read by Doctor Blue on the pathology of plague:

"I would like to supplement what Doctor Blue has said by a few words. Doctor Blue had practically despaired of securing any public interest in this subject, which we would think one of the most vital to anyone living in San Francisco, when, about two weeks ago, he in company with a committee of the state society had a joint session with the directors of the Merchants' Association and the Merchants' Exchange. As a result of that meeting, the fear of the wrath of God was put into the hearts of the Front Street merchants, and they got very busy. . . .

CALIFORNIA STATE DEPARTMENT OF PUBLIC HEALTH

By GILES S. PORTER, M. D.
Director

Large Population Served by Full-Time Health Units.—There are at present fourteen full-time county health departments in California and, in addition, ten cities with full-time organizations independent of county units. The territory included in these county units at this time is as follows:

1. *Contra Costa County.*—All unincorporated territory and all incorporated towns except Antioch, El Cerrito, Pittsburg, and Richmond, or 41,472 of the 78,608 population.

2. *Imperial County.*—The unincorporated territory and El Centro and Westmoreland, or 38,910 of the 60,903 total population.

3. *Los Angeles County.*—The unincorporated territory plus thirty-seven of the forty-five incorporated towns and cities. Of the eight not included in the unit, Long Beach, Los Angeles, and Pasadena maintain independent whole-time health departments. The population under the county health department is 694,635. The total population for the county is 2,208,492.

4. *Madera County.*—All territory within the county, including the unincorporated towns, a complete unit of 17,164 population.

5. *Monterey County.*—All territory within the county boundaries except Salinas, 43,442 of the total 53,705.

6. *Orange County.*—All territory including the incorporated towns and cities, a complete unit of 118,674 population.

7. *Riverside County.*—Only the unincorporated territory. The city of Riverside maintains a separate full-time health department and the health officer of the county unit is also health officer of the city. This health officer, therefore, serves 63,208 of the total 81,024 population.

8. *San Bernardino County.*—Only the unincorporated territory is included in this unit, or 48,028 of the total 133,900 population.

9. *San Diego County.*—The unincorporated territory plus La Mesa, National City, and Oceanside constitutes the county health department, while the city of San Diego maintains a separate full-time organization. Both are under the same health officer, who serves 193,381 of the 209,659 population in the entire county.

10. *San Joaquin County.*—All territory within the county, a complete unit of 102,940 population.

11. *San Luis Obispo County.*—All territory within the county, a complete unit of 29,613 population.

12. *Santa Barbara County.*—All of the unincorporated territory and the incorporated towns with the exception of the city of Santa Barbara, which maintains an independent whole-time department. Thirty-one thousand five hundred and fifty-four of the total 65,167 population are under the county unit.

13. *Stanislaus County.*—The unincorporated territory plus all of the incorporated towns except Newman, Patterson, and Turlock, or 50,191 of the total 56,441 population.

14. *Yolo County.*—The Woodland Clinic provides full-time health service for the entire county with the chief of the hospital staff as health officer. The population of this county is 23,644.

Throughout this discussion the population figures as determined by the 1930 census have been used. In addition to these county units, the following cities maintain full-time health departments: Berkeley, Oakland, Palo Alto, Pasadena, Long Beach, Los Angeles, Sacramento, San Francisco, San Jose, Santa Barbara. This entire group of fourteen counties and ten cities provides the benefits of established public health practice for 4,152,254 of the 5,677,251 persons in this State, or 73.13 per cent of the total population. This number of organized health departments materially affects the work of the state department. It is only the extensive outbreak of the very unusual epidemic

affecting several counties which necessitates a state investigator in the whole-time units. Therefore, the Bureau of Epidemiology conducts most of its epidemiological work in the other forty-four counties.

This area under full-time health departments comprising 73.13 per cent of the total population of California insures more complete morbidity reporting than would otherwise be possible. These fourteen counties and ten cities during 1930 reported 88.4 per cent of the total cases of tuberculosis recorded; 79.1 per cent of the total cases of diphtheria; 81.8 per cent of the total cases of measles; and 61.2 per cent of the typhoid fever. In 1931 they reported 87.9 per cent of the cases of tuberculosis; 81.5 per cent of the diphtheria; 72.1 per cent of the measles; and 58.5 per cent of the typhoid fever. Some fluctuations of these percentages would be due to epidemic variations in different sections of the state; also with reference to the incidence of typhoid fever, the rate is higher in the rural territory.

Whooping-Cough Deserves Consideration.—There were 14,044 cases of whooping-cough reported in California during the year 1932, and during January of the present year 1,058 such cases have been reported. More cases of whooping-cough are reported generally during the spring and early summer than during other months of the year. In some years, however, the disease may prevail extensively in the late summer months. Never before in the history of California have so many cases of this disease been reported as were reported last year. The greatest number of such cases to occur during a single year before 1932 was in 1925, when 10,466 cases were reported. . . .

Syphilis as a Cause of Death.—The axiom that "Men do not die of the diseases that afflict them" might especially refer to syphilis. In the "1929 Mortality Statistics" we find just short of ten thousand deaths reported from syphilis. It is only when we sort out from the reported deaths under other classifications those really due to syphilis that we have any idea of its high rank as a cause of death. Locomotor ataxia and general paralysis of the insane are syphilis. Recent researches indicate at least 15 per cent of deaths from heart and blood-vessel conditions are caused by syphilis, probably one-fifth of those from the nervous system, one-fifth of deaths during early infancy, and a significant number from diseases of the kidneys, liver, stomach, and other vital organs. Altogether these mount upward of 100,000 and place syphilis where it belongs, among the first five great killers—syphilis, heart disease, cancer, pneumonia, and nephritis.

Typhoid Fever Still a Problem.—In spite of the fact that the typhoid fever death rate has been reduced greatly, the control of the disease in many communities of the state is still an important problem. This is true particularly along some of the inland rivers, notably in the delta region of the San Joaquin and Sacramento Rivers. In those districts, where water from irrigation ditches is used for drinking purposes, typhoid fever control is also an acute problem. In Imperial County, for example, there are 2,460 miles of irrigation canals, furnishing the major portion of the domestic water supply for the residents of the valley. Typhoid fever is a major problem in such a district and it will probably always be a problem in Imperial County. In future years, when the all-American canal is built and completed and the desilting works put in operation, there may perhaps be an increase in the numbers of cases that occur. In spite of educational work undertaken, a large percentage of the population still drinks untreated ditch water. The county health department advocates the use of filters. These can be used only where there is a high canal bank, however. Through their use, a clear water of low bacterial count is made possible. In some places, dairymen are now using filtered ditch water for their cattle. . . .

BOARD OF MEDICAL EXAMINERS OF THE STATE OF CALIFORNIA*

By CHARLES B. PINKHAM, M. D.

Secretary-Treasurer

On March 2, 1933, Governor James Rolph, Jr., announced the following appointments to membership on the Board of Medical Examiners:

Brown, Harry V., M. D., vice Magan, Percy, M. D. (who declined appointment), for a term ending January 15, 1935.
Geistweit, William H., Jr., M. D., vice self, for a term ending January 15, 1937.
Schoff, Charles E., M. D., vice self, for a term ending January 15, 1937.

Mr. Walter Linforth, well known San Francisco attorney, was appointed chief counsel for the Board of Medical Examiners, effective March 13, 1933.

At a regular meeting of the Board of Medical Examiners held in Los Angeles, February 27 to March 2, and continued on March 7 owing to the bank holidays, the following changes in status of licentiates was made:

Alexander, Charles B., M. D. License restored February 27, 1933, and placed on probation for a period of three years.
Atkinson, Archibald A., M. D. License restored February 27, 1933, and placed on probation for a period of five years, without narcotic privileges.
Bland, George H., M. D. License restored March 7, 1933, and placed on probation for a period of five years, without narcotic privileges.
Collier, Francis M., M. D. Found guilty March 7, 1933. Probation for five years, without narcotic privileges.
Cornman, Leighton R., M. D. License restored February 27, 1933, and placed on probation for a period of five years.
Dean, Charles J., M. D. License revoked March 7, 1933.
Gardner, George M., M. D. Found guilty February 28, 1933. Probation for five years.
Hindman, Samuel J., M. D. License revoked March 1, 1933.
McLeod, William H., M. D. License revoked March 7, 1933.
Mayo, Woodward B., M. D. License restored February 27, 1933, and placed on probation for five years.
Niemann, Theodore H., M. D. License restored March 7, 1933, and placed on probation for five years, without narcotic privileges.
Pattee, Eliphalet, M. D. License revoked March 7, 1933.
Stewart, Charles M., M. D. License revoked March 1, 1933.
Zachariah, Simon R., M. D. License revoked March 1, 1933.

News Items

The records show that B. D. Johnson on February 27, 1933, pleaded guilty in the Municipal Court of Los Angeles to a charge of violation of the Medical Practice Act and was given a suspended sentence of sixty days in the county jail.

"Dr. Matthew J. Marmillian, negro physician with offices at 3315 Central Avenue, was lodged in the city jail yesterday on a charge of suspicion of murder, following the death Saturday of Margaret Scott, eighteen years of age, negress of 1529 East Twenty-ninth Street, as the result of an illegal operation" (Los Angeles Times, February 17, 1933).

"Dr. George Anthony Zorb, former police surgeon, charged with shooting his lifelong friend, Dr. Claire Wilson, was freed on \$25,000 bond yesterday, following his arraignment on a charge of assault with a deadly weapon. His preliminary hearing was set for March 15. Doctor Wilson was still in a critical condition at the Georgia Street Receiving Hospital, Chief Surgeon Wallace Dodge stated (Los Angeles Examiner, March 1, 1933).

"Dr. C. A. McDowell, thirty-year-old Covina physician, yesterday was released on \$250 bail after being arrested by deputy sheriffs for failing to report treatment of a gun wound . . ." (Los Angeles Illustrated Daily News, March 9, 1933).

* The office addresses of the California State Board of Medical Examiners are printed in the roster on advertising page 6.

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MAY, 1933

No. 5

MEDICINE AT THE CROSS-ROADS*

By RAY LYMAN WILBUR, M. D.
Stanford University

MY topic, "Medicine at the Cross-Roads," was chosen with the idea in mind of presenting to you some of the problems that face the medical profession in the immediate present. In the short time that I have had association with the medical profession we have met and conquered a series of crises.

The first one came when I was a medical student in the encroachment of the laboratory upon the field of medical education. The laboratory required new and large financing. It compelled attention. There were two main paths open. One was to disband or modify the large number of existing medical schools, to eliminate the commercial medical school and to make sacrifices that would permit the development of clinical medicine and science side by side. The other path was the cheap one. That was the road taken by the osteopath, the chiropractor, and others. The medical profession was well directed. It was possible for it to have held back the advancement of science for a generation. It did not. It went right into medical education and helped. Many of the older men who had fought for a lifetime for positions on the faculties of medical schools resigned and turned their work over to young men developed along more scientific and laboratory lines. The result of this was that in thirty or forty years medical education in the United States has reached a position second to none in the world. Those sacrifices were made by the medical profession honestly, promptly, and very intelligently.

Then came the crisis of public health. What should the doctor do? Should he absorb the responsibility of public health or fight the new measures that were being inaugurated? Most of the medical profession had been trained to treat disease. It was reasonable to expect that with scientific laboratories and enlarged personnel, public health could be very effective in controlling disease. Again the physician took the path of difficulty for him. For the new system of preventive medicine resulted in changing almost every phase

of the old practice of medicine. The physician joined in on the attack on typhoid fever, insisted on the control of smallpox, pushed malaria into the background, and fought to control syphilis. Much of medical practice was changed, but the changes were welcomed. The doctor had fewer patients but there was better health, not only for adults but for the children, and the lowest morbidity rates the nation has ever known were brought about. Again we see here the medical profession facing the issue, with the result that we have an increase in the average age span of our citizens. This, too, has changed the practice of medicine. At the same time we have met the question of an increased number of mental cases. Whether this has come from the extension of the age limit or from other sources connected with our civilization is not so important as it is to recognize that medicine is rapidly taking on a full responsibility for mental cases and preventive mental hygiene.

Associated with the control of mental conditions has been the increasing encroachment of the government into the field of the care of the sick. Hospitals cost money. Hospitals were required for mental cases. Other forms of medical care, such as tuberculosis, demanded hospital attention. There were only two sources of money—the government and private funds—so that private and public hospitals grew up side by side, but the number of beds in the public hospitals has increased much more rapidly than in the private. The tendency has been to give superior care to the indigent and to all accepted as public charges. If we note the development of public hospitals by the county, the state, or the municipality, we can see here in California, in the great San Francisco Hospital and the magnificent new Community Hospital in Los Angeles, just what the public has been willing to do. These buildings and their maintenance came out of the taxpayer, although the taxpayer knows, if he knows anything about his taxes, that he was just the one who would not land in the hospital provided by his expenditures. It was the nontaxpayer who would go into these institutions.

But more dramatic than these rapid changes were the relationships of the physician to the Great War. He selected the men to go into service with the Expeditionary Forces. He worked with enthusiasm and skill. Emergency hospitals

* Extemporaneous address given at the first general meeting of the sixty-second annual session of the California Medical Association, Del Monte, April 24-27, 1933.

were developed of very high quality. But with the war there developed habits of large spending and with the great source of income provided by the income tax it was easy to go forward in the name of the public with a hospital-building program such as has never been seen before—the Veterans' Bureau hospitals. We have planted them all through the United States. They were the last word in hospital buildings. Certain regulations were passed by Congress, many of them not on the recommendations of physicians, but in spite of them. We have seen the greatest hospital service in the world thus built up by our Federal Government. It was a new encroachment in a field we had thought of as belonging to medicine itself.

Now as we review the country's hospital program, we find that over 70 per cent of the hospital beds in the country are paid for by the government. If you will permit me to give just a figure or two: there are 7,000 hospitals with approximately 1,000,000 beds, 200,000 of them vacant at the time of this survey. Of some billion dollars or more for annual maintenance, 46 per cent comes from patients, 46 per cent from taxes, and about 8 per cent from endowment funds, gifts, community chests, and the like. Get the picture. About 46 per cent of the maintenance charge for the hospitals is paid for by the government. At the present time there is low occupancy of the beds in institutions supported by endowment or by patients' fees. There is high occupancy in most of the government-supported hospitals. In the course of a year one person in seventeen gets into a hospital, but the total expenditures for hospitalization are as much at the present time as for all other forms of medical practice. One out of seventeen must meet one-half of the expenditure for medical service in any one year. We find that the average cost of a patient's going into a hospital is \$140. The hospital gets 39 per cent, the nurse 8 per cent, and the physician approximately 45 per cent.

The next crisis faced by the general practitioner was the development of specialism in medicine. Specialism has grown up rapidly in the last thirty or forty years and has become almost a fad with the public. One was not considered a member of high society in many parts of the country unless he had gone to a certain specialist. It has developed so that some 30,000 specialists now have a larger income than 70,000 general practitioners. The advance of the specialist came in with the hospitals, and in our discussion we should all frankly face the question that the hospital and the specialist have been closely associated. This is not a criticism of the specialist. He has been most effective and has done good work, but he has had more than his share of the income that would otherwise have gone to the general practitioner. Just as the surgeon received larger fees than the internist, so the specialist has been more favored than the general practitioner. All of these forces have had a profound effect upon medicine. Many of us have failed to sense their significance.

Where do we stand today? We find new and unusual problems before us of an economic sort. A Committee on the Costs of Medical Care started in some years ago to study and obtain the facts regarding all of the costs involved in the care of the sick. It was a long, extensive and expensive study. Out of it came some twenty-eight bulletins. Each one presented as clear a picture as could be obtained in a difficult field. Whether you like the facts in these bulletins or not they have to be met. There they are and there is no escape from them. The great question before the medical man today is, is he willing to look those facts in the face?

I like to tell the story of the colored man who said, "When I has anything to say to a mule, I says it to his face."

If we have anything to say to these facts, let us look them in the face and not get around where they may start into action. The doctor is not inclined to fool himself. He knows that facts control. It is because of this that I have confidence that we will succeed in meeting this crisis as we have the others.

Over the years something has been developed which we have hardly sensed. Forty years ago the doctor had the largest part of the income from the patient, but the physician of today has less than one-third of the total expenditure for illness. The rest of it goes to hospitals, to drugs—many of them not so important perhaps, because they are self-administered—to the dentist, the nurse, and so on. In other words, the accessories weigh far heavier in the economic field than does the doctor himself. Certainly this means that if the doctor is to control with only one-third of the income in his hands, he must lead. Should he fail to lead in this tangled social and economic situation, others will step to the fore. There is going to be a bell-mare that will lead us out of our present difficulties. I want that bell-mare to have the label of M. D.

Some of you have, no doubt, seen the collection in the Los Angeles Museum of the skeletons taken from the asphalt beds of Southern California. There are the sabre-toothed tiger, the camel, the great cranes and a lot of other animals, now extinct, that used to roam the Southern California plain. Among these we find the skulls of the pocket gopher. These skulls show that the pocket gopher of today was the pocket gopher of those prehistoric ages. He learned how to meet conditions. He stored foods against drought, he protected himself against flood, he was able to avoid his enemies. If there were no grasses or seeds he ate roots. This has permitted him to go through tens of thousands of years and succeed. He met the processes of evolution and overcame them. The forces of evolution are operating in medicine. Tradition is a good thing, but traditions have killed off more races than anything else. The traditions of the medical profession are among the great possessions of the human race, but traditions must mold with changes. Some of our traditions must give way to meet the conditions

of today. Blind adherence to the past must not lead the medical profession, as we know it, into extinction. As far as I can see, the greatest stress before the medical profession of the present day will be necessary economic adjustment. We can in no way avoid the implications of the present situation. It is essential to maintain the proper relation of patient and physician.

I have already pictured some of the happenings in the Veterans' Bureau. For some years I was chairman of its Medical Council. We made recommendations on questions of compensation, care, disability ratings, etc. We saved the government millions of dollars. But our decisions were not elastic enough to please those desiring help and the politicians. Had the director of the bureau been a medical man with power to make decisions on the basis of scientific medicine, we would have a vastly different picture in the Veterans' Bureau today. The decisions were largely made, although basically of a medical character, by those without a medical training. The very presence of the hospitals was a temptation to expenditure.

The young people of today who are starting out to build families know more of the possibilities of medical care than ever before in our history. They may have limited financial means, but more and more of them want all that science can offer in the care of their own bodies and those of their children. If they cannot secure what they know exists through the doctor, they will get it through the politician, for the politician has found this a way to get votes. There is no escaping this. Look at the great Los Angeles Hospital, built by the taxpayers.

The question then is, will the doctor be able to sit on top of the pack? Will he be the captain during these present transformations or will someone else tell him what to do? The answer is in the hands of such men and women as are gathered here at this medical meeting today. The cigarmaker tried for a long time to compete with the machine. He does not any longer. The machine got him. Individually we cannot compete with the present economic forces. Collectively we can steer the great medical machine that has developed if we think in terms of the whole public and if we meet the legitimate needs of our people for medical service.

Out of the population in a given year only so many are sick. Of the people that are sick a considerable number are indigent and automatically fall into the taxpayers' pocket. The others belong to different economic groups. In America we have been on the way up all of the time. We have not thought of a stratified society. We think of a constant rise of young men and young women from the bottom to the top. As I have said, these young people want the very best medical care in the very beginning of their economic period of earning a living. We can picture readily the burden of sickness that strikes our nation in the course of any given year. We can prophesy just about what it will be in character as well as in extent, but no one can prophesy what the burden

of sickness will be in so far as the individual is concerned. Only a comparatively few are sick, and yet those few must bear the heavy medical costs. The hospitals, the various laboratories, the dentists, the nurses—all come in for their share. The great mass of men and women want to pay their own way. They want to meet the costs of medical care. This is impossible at the present time unless we devise a method that will spread the payments over a much longer period of time than just the period of an illness. We must spread it, too, over large numbers of individuals rather than over a few. In other words, there must be periodic payments over a long period of time to provide for the concentrated costs of illness. Otherwise they cannot be paid. This means that an insurance basis must be devised to give security to the physician and care to the sick. If we grant that this is the best plan the most important question is, who is going to organize it? Who is going to handle it and protect the interests of the doctor and of the patient? Is it going to be the government, is it going to be the doctor, is it going to be someone in between? Is there a place here for the commercial insurance companies? No, for there is no advantage in going easy on the insurance company. A mutual organization seems to be the only one. A nonprofit organization it must be if it is to be effective.

Who is going to set it up? For such organizations are going to be set up here, there, and in other places throughout the country. It will cost less than \$40 per year per person to provide medical care on a substantial basis. Probably the figure can be much reduced. It is easy to see what the broad situation is. The larger the number involved, the greater the sums received, the less the costs are apt to be to any one individual. We must remember, too, that we are not giving medical service to all members of the population as we should. The committee's studies show that there is a considerable percentage of our people who receive no care from either physician or hospital. There are millions who never have periodical examinations. There are millions who receive no dental care. In fact adequate medical care would require 60 per cent more service from physicians than we now have. The field is wide open to the physician. This does not mean that the doctor is going to secure great profit out of a better organized economic mechanism. We must remember that, viewing the ranks, the doctor is receiving very modest compensation, for on an average the income statistics show that he receives for himself \$4,000 to \$5,000 a year and that in many parts of the country \$2,500 is the outside figure. Many members of the medical profession have to make \$5,000 to \$10,000 before they can buy even a postage stamp for themselves. They are working for the automobile, the nurse, the telephone, the office building, for a long time before they get around to provide anything for themselves. The doctor, too, needs to keep up with the rapid progress of medicine. He needs to keep his body in good physical condition. Keeping up to date is his primary responsibility. Every

doctor in California ought to have a vacation at least once a year and ought to have a period of educational training every three years. It takes money to do this. It takes organization to provide the opportunity for him to go and also to return and fit back in again into his life's work. Without increasing our present expenditures for medical care, but with readjustments within those expenditures there would be sufficient funds available to adequately protect the welfare of the physician and to provide for the care of the sick. Undoubtedly, with different standards there would be some increase required which would be gladly met by the public.

There are some very practical things for us to do. In front of us are held up certain bogies and scare-crows. Attempts to organize economics in medicine cannot be stopped by calling names. I have recently had a considerable experience with government. I have learned to know what is called the government bureaucrat. He is an honest, effective citizen, but I have lived and slept with him for four years and have become afraid of him in the field of medicine. We are fortunate in this country in that our Federal Government has for the most part in its one hundred and fifty years of history not encroached upon public education and personal health. These have been under the control of the states. Education has been put in order, has been supported and organized under the immediate control of state and local governments. Personal health has not been. The relationships of the Federal Government to public health have been carried on with due regard to the rights of the states. If there is to be anything done by the government in the matter of the costs of medical care, it should be done by the smaller units of government and not by the Federal Government itself. Each state and each community are different from the others. The conditions in California are as different as can be from those in Mississippi. What might be successful in Mississippi cannot apply here. We must take up the situation where we find it today. Each community has in it so many physicians, so many hospitals, private or public, and so many services. These form starting points for any future programs. As it stands today the hospitals under private endowment and private auspices are in real difficulties. There will be a tendency for them to die out and for the public hospitals to grow in size and responsibility. Since around each hospital, public or private, there is now a grouping of physicians and many of the accessories of medicine, why not use these existing institutions as centers about which to congregate the forces of medicine. It seems to me that by increasing the facilities and the physicians and introducing some form of periodical payments the most effective and promising experiments could be carried out. It is not difficult for us to develop solutions in this field. I am convinced that unless we do so the forces of government will compel some such organization. If we can build up islands of control on a sound basis throughout the state around such centers, we can have reasonable security that

they will grow and that the man of medicine can control much of his future. There is the expression of fear in connection with such plans that there will be interference with the private practitioner, the free choice of physicians by patients, and so on. This need not be if the proper organization under the proper controls is brought about. We have to remember that the family practitioner has met one thing after the other in recent years and he is still the dominant factor in medical practice. The specialist has damaged his position, but has been unable to take his place. The general practitioner is the key to the situation. We have discounted somewhat in our development of scientific medicine the clinical skills of the general practitioner. I was interested a while ago to learn that one of our medical schools had tried to secure funds to hire a general practitioner to teach medicine. He has lessons for the medical student of today that can be learned in no other way, but the general practitioner cannot survive unless he has help. Undoubtedly, too, like the pocket gopher, he must meet conditions of all sorts and still be himself. In the days gone by it was easier when 90 per cent of the income from the care of sickness came to the doctor and when 90 per cent of the care of the patient was actually performed by the doctor than it is today. Now with widespread hospitals, good highways, and automobiles, there is easy access to medical care in most parts of the country. The old family doctor had no such fund of knowledge as is now possessed by the general practitioner of today. With the increase in knowledge has come increase in facilities and with them all the family doctor must coöperate. He should be the master of ceremonies, but he cannot be master if the situation becomes so complicated that there is no money for him. We must work out plans so that there will be a wide place for him in the rim of the so-called medical dollar. To do this we must very soon get down to the point of decision. In the next five years the paths of the future of the practice of medicine for many years ahead will be determined. The medical profession must take the leadership. If not, others will. I am convinced that any smart politician could be elected governor of this, or any other state, if he will assure the people of the state of a universal distribution of medical care at a low cost. The physician must take up his traditions and march forward with them for the good of his patient and himself. Tradition was a great baby killer. It can become a great doctor killer unless the physician is willing to look the facts now available right in the face. If we waste our time in arguing as to whether minority reports or majority reports are the better, we are paddling in water that is already over the dam. As a coöperative body giving the best service we can to the public, the medical profession should be ready to steer the craft over the shoals of medical economics in the state of California. We must do it. That is the message I leave with you.

Stanford University.

REPORT OF THE COMMITTEE ON THE COSTS OF MEDICAL CARE*

ITS SIGNIFICANCE TO THE MEDICAL PROFESSION

By ARTHUR C. CHRISTIE, M. D.
Washington, D. C.

THE publication of the report of the Committee on the Costs of Medical Care has taken place at a time when the entire world is in a state of great social unrest. There is uncertainty in every field of human relations. The only certainty seems to be that change is inevitable. The poorest argument in favor of any plan at such a time is that "it is timely." What is "timely" today may be incongruous tomorrow. Such rapidly changing social conditions render it exceedingly important that all proposed new plans be scrutinized with the greatest care. There never was a time when neat panaceas were so out of place or when it was more important to plant ourselves firmly on sound basic principles.

VALUE OF THE REPORT OF THE COMMITTEE ON THE COSTS OF MEDICAL CARE

The medical profession, engrossed as it has been in the advancement of the science of medicine and the art of medical practice, has come only slowly to realize that it has a vital interest in the economic and social aspects of medicine as well as in its advancement as an art and science. One of the chief values of the report of the Committee on the Costs of Medical Care is the fact that it has aroused nation-wide interest in these subjects on the part of the profession.

BASIC DIFFERENCES BETWEEN MAJORITY AND MINORITY REPORTS

The views and recommendations of the majority of the Committee on the Costs of Medical Care have been fairly and adequately presented. The fact has been pointed out that there are many points of agreement between the majority and minority reports. It is possible to so tabulate categorical statements of each of the reports as to make it seem that there is no essential difference between them. They differ, however, in two vitally important respects, namely, in the method of approach to the problem and in the emphasis placed upon certain aspects of it.[†]

APPROACH OF THE MINORITY REPORT

The minority approached the problem with the idea of carefully conserving all of the important values in our present methods of medical practice. We were especially concerned to preserve the personal relationship between physician and patient, the free choice of physician by the patient and all of those aspects of the practice of medicine which have established it as a great profession, free from commercialization. We were not willing to permit ourselves to be influenced by the charge that the

medical profession is ultra-conservative and unprogressive and that we would be blamed as reactionaries if we failed to agree to the proposals of the majority. It is true that medicine is a conservative profession, but its conservatism has repeatedly saved the people from exploitation. Such conservatism has manifested itself particularly in combating the use of nostrums and the activities of quacks. The tremendous progress of the science and art of medicine in the past fifty years is sufficient refutation of the charge of unprogressiveness. The charge has arisen because the profession insists upon careful scrutiny of proposed changes in methods of caring for the sick and especially because it insists that new methods or procedures be founded upon the sound basis of past experience or upon careful experimentation. It is our conviction that several of the important changes in medical practice proposed by the majority of the Committee on the Costs of Medical Care do not meet these requirements.

MINORITY REPORT RECOMMENDATIONS ON PRESENT-DAY PROBLEMS

The minority also approached the problem from the standpoint of what is immediately practical and beneficial under the present conditions of medical progress and social organization, and recommended first those methods which would eliminate waste in our present system. Our first recommendation was for certain changes in governmental activities in the care of the sick. We would like to see the government confine itself to those activities connected with the public health and the public services, such as the Army, Navy, etc., and to eliminate the excessive waste in the present methods of caring for veterans. We could see no good reason why the whole people should be charged with the care of the sickness or disability of veterans which is in no way connected with war service, especially when such care must be accompanied by tremendous waste due to transportation of veterans between their homes and government hospitals and the multiplication of hospital beds far beyond the country's needs. It is gratifying to note the improvements already initiated in veterans' relief by the present administration. This greatest threat of the establishment of state medicine seems, under the stress of economic conditions, to be removed for the time being. We wished to see the government curtail its activities in this direction, but on the other hand we recommended that the medical care of the indigent become increasingly a community problem instead of a problem for the medical profession alone. The care of the poor is the greatest burden now upon the profession. We believe that this burden should be assumed by the entire community and that the physician should bear only his share of it like any other citizen. It seemed to us illogical to assume that the community would be willing to spread the costs of caring for persons with low or moderate incomes before it is demonstrated that communities would generally take care of those who have no income at all.

* Read before the first general meeting at the sixty-second annual session of the California Medical Association, Del Monte, April 24-27, 1933.

† Editor's Note.—Digests of the Majority and Minority Reports were printed in the December 1932 CALIFORNIA AND WESTERN MEDICINE, page 397.

JOINT MAJORITY AND MINORITY RECOMMENDATIONS

In continuation of these recommendations for elimination of waste in our present methods, the minority joins with the majority of the committee in emphasizing the importance of careful studies in each community with a view to better coordination and evaluation of our present methods and agencies for caring for the sick. Nearly every community needs some authoritative body to coordinate and control its existing health agencies, including its hospitals.

The majority of the committee probably agree with us in all of these recommendations, but they treat them as matters of secondary importance. It is the belief of the minority that the entire problem would be simplified and would assume different proportions if the above recommendations were put into effect.

OTHER ASPECTS IN SOLUTION OF PRESENT-DAY PROBLEMS

There is another aspect in approach to the problem which the minority believes must be considered. The problem has been confused by attempts to isolate it from its natural setting in the social order. This has resulted in proposals for its solution which have no proper relation to medical progress on the one hand, nor to fundamental questions of public welfare on the other. It is essential if cures are to be found for present difficulties, and especially if the problems of medical care are to be settled on any permanent basis, that they be understood and dealt with in their relation to the entire social-economic situation of the nation.

ANALOGY BETWEEN "MEDICAL SERVICE" AND "FOOD AND SHELTER"

The first paragraph of the report of the Committee on the Costs of Medical Care is as follows: "The problem of providing satisfactory medical service to all the people of the United States at costs which they can meet is a pressing one. At the present time many persons do not receive service which is adequate either in quantity or quality, and the costs of service are inequally distributed. The result is a tremendous amount of preventable physical pain and mental anguish, needless deaths, economic inefficiency, and social waste. Furthermore, these conditions . . . are largely unnecessary. The United States has the economic resources, the organizing ability, and the technical experience to solve this problem." If the words "food and shelter" are substituted in the above paragraph for "medical service" and "service," the statement will remain just as striking as the original and nothing will be subtracted from its truth. It would then read as follows: "The problem of providing satisfactory *food and shelter* to all the people of the United States at costs which they can meet is a pressing one. At the present time many persons do not receive *food and shelter* which is adequate either in quantity or quality, and the costs of *food and shelter* are inequally distributed. The result is a tremendous amount of preventable physical pain and mental anguish, needless deaths,

economic inefficiency, and social waste. Furthermore, these conditions . . . are largely unnecessary. The United States has the economic resources, the organizing ability, and the technical experience to solve this problem."

It is, of course, recognized that the two problems are different in their details, but both have the same underlying social and economic basis. The solution for one is the cure for the other, and no permanent solution for either will be found until that for both is put into operation. All other solutions will be in the nature of temporary expedients which may eventually only substitute new evils for old.

ECONOMIC NATURE OF MEDICAL CARE

Fundamentally the problem of the provision of medical care is an economic one. The common statement that "only the very rich and the very poor receive good medical care" is far from the truth. Generally speaking, the adequacy of medical care is directly proportionate to the economic status of the family, just as is the adequacy of food and shelter. It is highly desirable that society should progress to the point where all are assured of the essentials of life, one of which is adequate care in time of sickness or injury. Until this ideal is attained there will be suffering and hardship. It seems clear that the solution must be sought in fundamental changes in the distribution of the fruits of industry which will enable the great mass of people to provide themselves constantly with the necessities of life. If our leaders of industry would address themselves unselfishly to this problem in its broadest aspects instead of devising paternalistic and socialistic schemes directed at isolated portions of the problem, hopes of solution would be brighter.

DIFFICULTIES FACED IN THIS ECONOMIC PROBLEM

The problems of furnishing medical care to all the people at costs which they can afford are complex and difficult. On the one hand they have arisen from the outstanding advances in the science and art of medicine during the past fifty years. Revolutionary changes have taken place in the care of the sick by developments in bacteriology, aseptic surgery and radiology, to name only a few of the fields in which great advance has been made. On the other hand, social changes have been almost revolutionary in nature. The luxuries of life of forty years ago are now necessities. The population has changed from one predominantly rural and agricultural to one which is urban and industrial. All of these changes, both in medical science and in society, are reflected in the costs of medical care. What satisfied people in the nineties is now entirely inadequate. People demand more, including all of the increased facilities for medical care. It is in the very nature of the case that it must cost them more.

SOME FUNDAMENTAL FACTS

With this background let me call your attention to certain facts which are essential to an understanding of the problem. The total annual cost

of medical care in the United States is about \$3,600,000,000. This includes all that is spent for the care of the sick and injured and also the entire expense of public-health activities. About \$514,000,000, or 14 per cent, of the total amount is met by taxation. Approximately \$188,000,000 is provided by private philanthropy. Seventy-nine per cent of the total, or about 2.9 billions of dollars, is paid by individual patients or families for medical care. Of this amount, about \$446,000,000 is for dentistry, \$270,000,000 for hospital care, and the huge sum of \$665,000,000 for drugs, half of which is for patent medicines. There remains about one billion dollars which is paid to the physicians of the country.

MEDICAL CARE COSTS IN COMPARISON TO OTHER COSTS

Now, three and a half billions of dollars seems a huge sum for the nation to pay for medical care. It is, however, only about 4 per cent of the national income and, when compared with other things for which people spend their money, it does not seem so large. For instance, a considerably larger sum than the total amount spent for medical care is spent for tobacco, candy, chewing gum, and cosmetics. The difficulty is not in the total amount spent, but in the uneven distribution of the costs of sickness. The 2.9 billions spent by individuals is not distributed evenly over the 123 millions of the population, but only among the 60 per cent of them who are ill in any one year. Further than this, of the 60 per cent who are ill about 80 per cent of them have light illnesses which cause little financial burden. The real hardship comes to the 20 per cent of 60 per cent of the people who have what has been called "castastrophic illness." We can further eliminate the rich and the indigent from the problem. The great complaint comes from the so-called moderate income class, which, of course, makes up the bulk of those who receive any income at all.

THE RESIDUUM IN THE PROBLEM

With the problem thus reduced it is still a problem which demands solution. At its minimum there are still a great number of families who find it exceedingly difficult or impossible to pay the costs of hospitalized or prolonged illnesses or for those illnesses which require expensive surgical or other special treatment.

No one understands the extent of these difficulties any better than the members of the medical profession. It is realized within the profession that certain changes in methods and improvements in practice can be of assistance in solving the problems of the costs of medical care. In the field of medical education, for instance, it is important that greater emphasis than heretofore be placed upon the training of physicians in the methods of disease prevention as it applies to public health and to the individual. Not only must the general practitioner be trained to occupy a larger field, but there must be better training and better control of specialists.

The Committee on the Costs of Medical Care was unanimous in agreement upon the necessity

for strengthening and extending public-health activities, for certain changes in medical education, and for coördination of medical services in each state and local community.

WHERE THE MAJORITY AND MINORITY REPORTS BEGIN TO DIVERGE

Up to this point there are no fundamental differences which could not be readily composed. The minority believes that we should approach the problem by carefully conserving everything of value in our present system and by first correcting those wastes and maladjustments with which it is immediately practical to deal. It is our view that the majority has plunged into the middle of the problem with utopian recommendations whose outcome no one can foresee, and that they have not sufficiently emphasized the interrelation of the costs of medical care and all of the other basic economic questions of our present maladjusted society. These, however, are questions of method and approach. I come now to consider the specific questions upon which there is real disagreement, which no explanations can reconcile.

THE FIRST MAJORITY RECOMMENDATION

The first recommendation of the majority of the committee is as follows: "The committee recommends that medical service, both preventive and therapeutic, should be furnished largely by organized groups of physicians, dentists, nurses, pharmacists, and other associated personnel. Such groups should be organized, preferably around a hospital, for rendering complete home, office, and hospital care. The form of organization should encourage the maintenance of high standards and the development or preservation of a personal relation between patient and physician."

It is clear, both from the wording of the recommendation and from the explanations in the text, that the committee contemplates a system of practice quite different from that carried on by what has been understood heretofore as group practice. Under this recommendation the entire medical profession is to be concentrated into groups, preferably very large groups in medical centers. The committee's statement with regard to this is as follows: "The committee's most fundamental specific proposal is the development of suitable hospitals into comprehensive community medical centers, with branches and medical stations where needed, in which the medical professions and the public participate in the provision of, and the payment for, all health and medical care, with the professional aspects of the service under the control of professional personnel."

THE MINORITY REPORT'S COMMENTS ON THIS

The minority report states that this plan, with its "branches and substations" has the familiar aspects of so-called big business organization. Certainly there is little in the present state of industry or the economic situation of the world to make it seem desirable to extend into the management of the professions those methods which have been in operation in industry and business. "Organi-

zation" has been almost a fetish in the business and industrial world, but the medical profession has not been generally attracted to its worship. The following paragraph from the minority report of the committee shows its attitude on this subject: "The medical center plan is the adoption by medicine of the technique of big business, that is, mass production. It seems almost impossible for those who are not engaged in the practice of medicine to understand that the profession of medicine is a personal service and cannot adopt mass production methods without changing its character. It is always the individual patient who requires medical care, not diseases or economic classes or groups. The neglect of this principle in other fields has brought serious evils that are now being corrected only with great difficulty."

SOME FACTS TO BE REMEMBERED

An important fact which should always be considered in connection with plans for group practice and group payment is the well established one that about 80 per cent of all illnesses are simple in nature and can be adequately treated by a general practitioner without the aid of specialists or elaborate apparatus. The proposal now is to set up the elaborate organization and machinery of the medical center or of multiple groups to care for all illnesses, including the 80 per cent who do not need group study or care.

Another fact that has been overlooked by the majority of the committee and which was pointed out by the minority is that multiplication of clinics and groups in large cities inevitably results in providing expensive equipment far beyond the communities' needs. Every additional group must have its specialists with all necessary equipment for their use even though the city may already be well supplied with such equipment. The minority of the committee said with regard to this: "It serves no good purpose to reduce overhead in individual clinics if the total cost to the community is increased through duplication of plants."

MINORITY REPORT VIEWPOINTS ON GROUP PRACTICE

The views of the minority on the subject of group practice were summarized in the following paragraph:

"The minority recognizes the advantages of group practice under certain conditions, especially in communities where practically all of the physicians can be joined in one, or at the most, in two groups. It does not believe that group practice offers any real solution to the problems of the costs of medical care except under very restricted conditions. The dangers of group practice are already apparent and the advantages either to the medical profession or to the public are limited."

ANOTHER MAJORITY REPORT RECOMMENDATION

The other recommendation of the committee which caused disagreement and which has created much discussion is as follows: "The committee recommends that the costs of medical care be placed on a group payment basis, through the use of insurance, through the use of taxation, or

through the use of both of these methods. This is not meant to preclude the continuation of medical service provided on an individual fee basis for those who prefer the present method. Cash benefits, *i. e.*, *compensation* for wage loss due to illness, if and when provided, should be separate and distinct from medical services."

The insurance plan favored by most of the majority was of the voluntary type. A few were in favor of immediate state control of medical practice through compulsory types of insurance.

MINORITY COMMENTS ON VOLUNTARY AND COMPULSORY INSURANCE

The minority report makes the following statement relative to voluntary types of insurance: "It seems clear that recommendations for further trial and expansion of voluntary insurance schemes in the United States are entirely inconsistent with the committee's own findings. To recommend that our own country again experiment with discredited methods of voluntary insurance is simply to ignore all that has been learned by costly experience in many other countries as well as in our own. Voluntary insurance systems are now in operation in many parts of the United States and are increasing in number and in size. In many places these schemes are being operated in accordance with the plan recommended by the majority of the committee, that is, by making contracts with organized groups of the medical profession. That they are giving rise to all the evils inherent in contract practice is well known. Wherever they are established there is solicitation of patients, destructive competition among professional groups, inferior medical service, loss of personal relationship of patient and physician, and demoralization of the professions."

With regard to compulsory types of insurance the minority group made the following statement: "The objections to compulsory health insurance are almost as compelling to this minority group as are those to voluntary insurance. The operation of every form of insurance practice up to the present time has resulted in a vast amount of competitive effort on the part of practitioner groups, hospitals, and lay-controlled organizations. Such competition tends to lower the standards of medical care, degrade the medical personnel, and make medical care a business rather than a profession. Proof of this is at hand in our own experience in this country with the only compulsory system with which we have yet had to deal, workmen's compensation insurance. The results named above are prevalent in many states. This is the rule to which there are a few notable exceptions. Under workmen's compensation, groups are soliciting contracts, often through paid lay promoters; laymen are organizing clinics and hiring doctors to do the work; standards of practice are being lowered; able physicians outside of the groups are being pushed to the wall; the patient is coerced by his employer to go to a certain clinic; and the physician is largely under the control of the insurance companies. These are not visionary fears of what may happen, but a true picture of widespread evils attending insurance practice. We

should need no better example of what must happen to medical care if compulsory insurance is extended to families."

EVILS OF SOME INSURANCE PRINCIPLES

The minority report tried to make it plain that it is not opposed to the insurance principle but only to the evils which seem inevitably to attend attempts to put it into practice. We recognized the fact that the adoption of some method of distributing costs of medical care to certain limited groups is inevitable. We know by the experience of both Europe and the United States of the evils attending insurance medicine and we wish at all costs to avoid them. There are, in addition to the evils enumerated in the extracts from the minority report which I have just read to you, certain facts with regard to insurance medicine which should be kept in mind. In the first place, the total costs of medical care are not decreased under insurance systems but actually and materially increased. This results because of the cost of administering the insurance and because of the rather astonishing fact that under insurance systems there is always an actual increase in days sickness per capita. Simons and Sinai, in their report on European health insurance, make the following statement: "Contrary to all predictions, the most startling fact about the vital statistics of insurance countries is the steady and fairly rapid rate of increase in the number of days the average person is sick annually and the continuously increasing duration of such sickness. Various studies in the United States seem to show that the average recorded sickness per individual is from seven to nine days per year. It is nearly twice that amount among the insured population of Great Britain and Germany, and has practically doubled in both countries since the installation of insurance." Dr. L. F. Barker, one of the signers of the majority report, in his final address before the Committee on the Costs of Medical Care, made the following statement: "In European countries the mortality rate has not decreased under their insurance systems. In the second place, the average number of illnesses has increased. In the third place, the average duration of illness has increased under the insurance system; and, in the fourth place, some wholly new diseases, namely, the compensation neuroses, have come as a result apparently of these laws."

MINORITY REPORT RECOMMENDATIONS ON INSURANCE SAFEGUARDS

The minority report, recognizing the evils to which most insurance plans give rise, but also realizing that there must be some method of spreading the costs of high-cost illnesses, offers the following safeguards which should always surround any plan to distribute the costs of medical care: (1) It must be under the control of the medical profession. (2) It must assure not only nominal but real free choice of physician. (3) It must include all, or a large majority, of the members of the county medical society. (4) The funds must be administered on a nonprofit basis.

(5) The patient must pay directly a certain minimum amount before insurance becomes operative. (6) It must make provision for community care of the indigent. (7) It must be separate from plans for cash benefits. (8) It must not require certification of disability by the physician treating the disease or injury. Under such safeguards the minority recognizes the value of trial of plans by county medical societies to distribute the costs of medical care.

COMMENTS ON CALIFORNIA MEDICAL ASSOCIATION STUDIES

Plans now being worked out here in California, fostered by the California Medical Association under definite prescribed rules, are being watched with extreme interest all over the United States. It seems important that such plans, under the initiative and control of the medical profession and in coöperation with the public health departments, hospitals, and public-spirited citizens, should be gotten under way as rapidly as possible. Otherwise the insurance plans already in operation, in many cases in the hands of lay corporations organized for profit, will be difficult to check. We must not, however, permit ourselves to be hastened into ill-advised action simply because such action seems to be expedient. Nothing is to be gained for either the medical profession or the public by trying new schemes simply to escape the charge of inaction. Every plan proposed must be carefully scrutinized to see that it fulfills the fundamental requirements of sound medical practice. It is true that any plan which depends upon joint action of the members of a medical society must require the members to submit to certain rules and regulations, but it is far preferable to operate under rules of our own than to submit to control by insurance companies, lay-controlled corporations, and finally of the state itself.

WHEREIN MAJORITY AND MINORITY REPORTS AGREE

I wish, now, to repeat that it should be made clear that the minority of the committee is in accord with the majority in all efforts to strengthen public health services and in the development of methods for prevention of disease; that there is no disagreement upon recommendations for elimination of waste in our present methods, better coördination of existing facilities for the care of the sick, or continued improvement in medical education. Even upon the questions of group practice and group payment the disagreement largely consists of difference in emphasis. The minority is not opposed to group practice under certain conditions, in fact it is fully recognized that group practice is often desirable and advantageous. There is, however, a tremendous difference between this position and that of the majority of the committee which recommends that *all* medical practice should be carried out by groups of physicians, preferably in great medical centers, and that the individual, private practice of medicine should be discontinued. The minority is *not* opposed to the spreading of the costs of medical care through insurance. It is opposed only to the

evils which have grown up under many different types of insurance practice. It is convinced that these evils can be avoided only when the safeguards set forth in the minority report are placed in operation.

CLEARLY DRAWN ISSUES

The issue is very clearly drawn. On the one hand we are to have the entire medical profession and all others engaged in medical care organized into groups furnishing medical care under contract to groups of laymen; at first they are to be permitted to operate under voluntary insurance, but later and inevitably compulsory insurance and state control is to prevail. On the other hand is the method described in the final summary of the minority report of the committee, as follows: . . . "medical care by the individual physician with the general practitioner in a central place; with groups and clinics organized only where the nature of the situation and character of the personnel render such organization a natural development; with elimination of wastes in our present methods and coördination of all existing agencies; with careful trial of new methods based upon sound experience; and with adoption of insurance methods only when they can be kept under professional control and destructive competition eliminated; all this through a well-organized, untrammelled medical profession true to the great traditions and ethical standards of the past."

FUNDAMENTAL DIFFERENCES IN APPROACH

It must be apparent that these are fundamental differences in approach to the problem. Both groups recognize the fact that there are evils to be corrected. The majority takes the position that these evils can be corrected only by radical changes in the system which has heretofore prevailed. Reduced to its simplest terms their plan proposes that medical care shall be entirely in the hands of medical groups and that it shall be paid for by groups of laymen. The minority contends that medical care is essentially an individual service and that it should be paid for by the individual to the limit of his ability to do so. It is admitted by all that about 80 per cent of all illnesses are of such a nature that they can be adequately cared for by the individual physician without specialized skill or elaborate apparatus, and that the individual is able to pay for such care without hardship. The problem is thus reduced to the care of those illnesses which require prolonged hospitalization or expensive specialized care or which produce chronic invalidism. The minority makes recommendations for the care of such patients through certain modifications in the present system which will spread the costs of the so-called "high-cost illnesses" but which require the individual to pay up to the limit which has been shown to be practicable in the various income groups. Such plans under the safeguards already mentioned, initiated by, and under the control of the medical profession, and insuring the preservation of the personal relationship of physician and patient are practical and desirable.

WILLINGNESS OF MEDICAL PROFESSION TO COÖPERATE

It is recognized that the medical profession must coöperate with all of those public-spirited citizens who are active in various movements for improvements in the people's health. In the present complex organization of society and industry, medicine has far-reaching social ramifications which cannot be ignored by the medical profession. The entire problem is one in which the profession must maintain a vital interest. Its attitude must be constructive and coöperative. Negative or obstructive tactics now will result in great harm to the profession and in the initiation of many ill-advised schemes under improper, commercial control. At the same time it is important that the laity support the profession in its efforts to combat the schemes of commercial organizations to exploit both the medical profession and the public under the guise of furnishing cheaper medical care. At the present time there is maladjustment in the application of medical care to the needs of the people, but it is not greater than the maladjustment in many other social-economic phases of society. It is essential if adjustments are to be hastened that there be cordial coöperation of professional and lay groups. No permanent good can come to society by adopting plans which will lower the quality of medical care or the standards of the profession upon which all must depend for that care, even though it be done in the names of the present-day gods—efficiency and organization. There is no doubt that the medical profession recognizes its increasing social obligations. It is anxious to maintain leadership in all problems pertaining to the health of the people, but it is also concerned that proposed new methods be solidly founded upon experience and that in adopting them we do not destroy the values accumulated through the years.

IMMEDIATE DUTIES OF INDIVIDUAL PHYSICIANS AND OF ORGANIZED MEDICINE

What then is the duty of individual physicians and of the organized medical profession at this juncture? Many seem to think that our main effort should be directed to maintaining the *status quo*. Familiarity with present-day problems, however, must impress one with the truth of the old colored preacher's definition. "*Status quo*," he said, "is de Latin for 'de mess we's in.'" There is no doubt that we can escape from the "mess we're in" only by constructive thinking and careful social planning.

UNSOUND PLANS MUST BE COMBATED

This is not to say that we are to offer no objections or opposition to plans that we believe to be unsound. In fact, I take this to be our first duty because there is immediate danger both to the profession and the public through the operation of a host of ill-considered or selfishly conceived schemes that are being launched almost daily in various parts of the country. We believe that the Committee on the Costs of Medical Care could have performed a great service by taking a strong and unequivocal stand against the commercializa-

ation of the practice of medicine, whether commercial practices are fostered by laymen or doctors. It should be remembered that there is no magic in the name "clinic" or "group" which can render ethical the solicitation of patients or solicitation of contracts when such practices are unethical on the part of the individual. If the members of the majority of the Committee on the Costs of Medical Care would today assist the medical profession to combat all selfish schemes to exploit the profession and the public, they could still do a great service. There is no grandeur in such service; the prosaic duties of housecleaning are tiresome and disagreeable, but they are nevertheless necessary. It is a fact that, although the majority of the committee did not intend it so, their recommendation for free trial of many plans has been an incentive to numerous organizations, set up to profit by the practice of medicine.

FIGHT FOR THE RIGHT MUST BE FIRMLY MAINTAINED

Even at the cost of being dubbed "obstructionists and reactionaries" we must oppose such organizations to the very limit of our ability. The most important point is that we shall make our opposition effective. The only way we can do this is by concerted action. The medical profession must stand together and act through its organizations as it never has before. When the day comes that no member of a county medical society will permit himself to be bullied or cajoled into assisting lay-controlled corporations to practice medicine that day will mark the doom of all such schemes, and the control of medical practice will return to the profession, where it belongs. We have heard much about what is going to happen to the medical profession, threats of what is going to be done for us and to us if we do not adopt certain schemes, but not much about assisting the profession to solve the problems with which it is struggling today. Now we have a right to ask, at least of the physicians on the Committee on the Costs of Medical Care, that they recognize the place of leadership of the medical profession in everything that pertains to the people's health and to give whole-hearted assistance to the profession in combating all unsound schemes. The second duty of the medical profession at this critical time is the careful study in every local medical society of the economics of medical care, and critical evaluation of every plan advanced for changes in the social-economic aspects of medical practice. I have already enumerated the fundamental considerations which should govern decisions upon plans for the distribution of medical costs through insurance. Some of these, such as the free choice of physician, the guiding control of the organized medical profession, and the avoidance of destructive competition between groups, are vital considerations.

HOSPITALIZATION PLANS

At the present moment the easiest type of insurance plan to put into operation seems to be that which provides for hospitalization. The American Hospital Association has set forth certain rules

which should govern in all hospital insurance plans. Among them none are more important than those which require the participation of all the hospitals in the community, and the elimination of all professional fees from the flat-rate charges. The initiation of such plans offers an excellent opportunity for coöperation between the local medical society and the representatives of the hospitals. Both the medical fraternity and the hospital authorities should seek and welcome the opportunity to work together in these plans.

GROUP HOSPITAL INSURANCE PLAN SAFEGUARDS

There are however, two important provisions which should be added to the plans approved by the American Hospital Association. The first is an agreement among the hospitals participating in a group-hospital insurance plan that no hospital will engage in the corporate practice of medicine in any form whatsoever. This is a provision which the local medical society should insist upon before it places its stamp of approval upon any hospital insurance plan. There is a constant tendency on the part of hospitals to take over various aspects of the practice of medicine and to profit thereby at the expense of the medical profession. Many hospitals have already taken over clinical pathology, anesthesia, and radiology and have established these medical specialties as hospital departments from which the hospital receives revenue. It is only a short step from this to the establishment of departments to practice other medical specialties, and finally general medicine and surgery, until the entire practice of medicine is institutionalized.

It is well-known that hospitals are now doing a large amount of medical practice under the workmen's compensation acts and that they often go so far as to solicit such work. All such arrangements are wrong in principle and unsound in practice and should be constantly opposed by the medical profession. It would be of great advantage if the agreement which I mentioned above were incorporated in the plans for group hospitalization insurance. If the hospitals will agree to remain in their own field and refrain from encroaching upon medical practice at any point, they can be assured of the coöperation and assistance of the medical profession to carry out plans for group hospital insurance.

The second important addition to the group hospitalization plans of the American Hospital Association is an agreement among the hospitals participating in the plan in any community that they will refrain from participation in any group hospitalization plan except that of their own local coöperative association. Since the requirements of the American Hospital Association are that practically all of the hospitals of a community must participate in an approved plan, this agreement would go far toward eliminating the commercial companies from this field.

Such agreements as those I have just mentioned would be of great value in cementing good relations between the doctors and hospitals and would eliminate many of the objectionable features of group hospital insurance.

THE "GENERAL PRACTITIONER" CONTINUES AS
A VITAL FACTOR IN MEDICAL PRACTICE

Finally, let me emphasize a duty of the medical profession which seems to me of fundamental importance. It involves the general practitioner of medicine and comes to the very heart of the difference between the majority and the minority reports of the Committee on the Costs of Medical Care. Notwithstanding much loose talk about the "passing of the general practitioner," he is today the center and foundation of the practice of medicine as he has been from the ancient days of Greece, where scientific medicine had its birth. The great traditions of medicine down through the centuries gather around him and many of its finest achievements are attributable to him. Even today when specialism has developed to a high point, when laboratory aids to diagnosis and treatment are multiplied almost beyond count and when groups and clinics are bidding for patients, it still remains true that nothing can take the place of personal contact between the physician and his patient. The practice of medicine at its best must always be a personal and very intimate service. Whatever methods are devised for supplying medical care to certain special groups or to certain types of sickness or disability, it will remain permanently true that more than 90 per cent of all medical care must be furnished by the general practitioner in personal contact with the patient. Neither the group, the clinic, nor the specialist can ever take his place. He will continue to do in the future, as he has in the past, the great bulk of routine practice which takes him into every household in the land and makes him the adviser and the friend in time of need. The general practitioner is facing today more difficult problems than any other man in the medical profession. They have arisen because of revolutionary changes which have taken place both within and without the profession. The medical profession should realize that it must rise or fall with him, and the public should be made to see that whatever injures the rank and file of the doctors of the land will inevitably bring injury to the people. To make the general practitioner more efficient should be our highest ambition as members of our common profession, to save him from evil should be the constant care of all. The medical profession faces nothing more important today than the restoration of the old-time family physician to his central place in medical practice. Our fortunes are inextricably involved with his. Here is a problem which the entire profession must help to solve.

FUNDAMENTAL IDEALS AND ETHICS ARE OUR
PERMANENT HERITAGE

Problems such as these we are considering today will come and go in the course of social progress, but the fundamental ideals and ethics upon which our profession is founded constitute our permanent heritage, which we must pass on to our successors. The cynic may believe the frequently repeated statement that "ethics is bunk," but the fact remains that all social progress depends upon the acceptance of ethical standards. Medical ethics

to the layman, too often, unfortunately, means the efforts of doctors to protect each other and to uphold their guild. It is true that, exceptionally, a wrong may be done in this direction, but medical ethics are founded upon eternal principles of justice and right and from the ancient days of medicine have furnished the incentive for high idealism and unselfish service to mankind. We must not be led by "counsels of desperation" to permit the breaking down of the ethical standards of our profession in the name of efficiency or the lowering of costs.

IN CONCLUSION

When the problems of the costs of medical care are finally solved it is probable that the recommendations of the Committee on the Costs of Medical Care for group practice and group insurance will play some rôle, but a very minor and limited rôle, in the solution. In the meantime these methods should be developed slowly and carefully and with strict regard to fundamental principles of medical practice which have been formulated and are well known to us all. At the present moment nothing is more important within the medical profession than a solid, united front. We must stand firmly together in our national, state, and county organizations to uphold the noble traditions and the high ethical standards of our profession. We must not permit ourselves to be broken up into competing groups or brought under the domination of institutions either of our own or others' devising.

The direction in which medicine is to develop is peculiarly in our hands today. It is no time for lazy indifference or smug complacency but for energetic action and wise planning. Only the pusillanimous would counsel surrender or compromise of principles because they are under attack.

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SOME TRENDS IN MEDICAL ECONOMICS*

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IN the past few decades there has been an increasing tendency on the part of business men to form "trade associations." Joint action in the business field replaces competition in many ways and more effectively where informal sentiments of coöperation are strengthened by formal organization of potential competitors. These trade associations have contributed their share toward uniformity of prices, a phase of business which has an appreciable influence upon competition.

TRADE AND PROFESSIONAL ASSOCIATIONS

In many professions, groups organized for the benefit of both the members and the public, exist. The outstanding difference between trade associations and professional associations must be constantly borne in mind. The purpose of pro-

* From the office of the director of the Bureau of Medical Economics, American Medical Association, Chicago.

* Read before first general meeting of the California Medical Association at the sixty-second annual session, Del Monte, April 24-27, 1933.

fessional association is seldom, if ever, exclusively or avowedly, to form a monopolistic agreement about price. These associations are usually not organized for or considered as business combinations. They do illustrate, however, a connection between public-spirited action and the private interests of their members.

The traditional beliefs and practices with respect to business life are exactly opposite to those with respect to the professions. One may enter business if he has sufficient money or capital with which to build his plant and market his goods, and he may continue in business as long as he can find customers willing to pay him profitable prices for his wares. It is usually contended, in defense of the aforestated attitude, that the consumer is capable of protecting his interests in traffic with business and that competition between business rivals ultimately eliminates the unfit.

WHEREIN THE MEDICAL PROFESSION DIFFERS

But this condition does not obtain in medicine. An individual may have capital enough to provide himself with the most elaborate offices and he may, by various means, be able to find persons who desire advice pertaining to health and disease, but this is not sufficient basis upon which to practice medicine. The medical profession has long recognized its prime object to be the service it can render to humanity. For the protection of the public, it holds that persons setting themselves up as doctors of medicine shall meet minimum standards of preparation and shall observe certain principles of ethical conduct. Recognition of the validity of minimum educational requirements is found in the statutes of the several states and territories regulating the practice of medicine. In the realm of business and commerce, such an arrangement is termed "restraint of trade" and is considered unfair because of the limitation it places upon free competition. In the professions, however, this "restraint of trade" is justified on the premise that it bears an intimate relationship to the public good. Those who deal with human values must, by training and conduct, be competent and dependable, hence the desirability of reasonable checks, standards, and restraints.

GROUP ACTION AND INDIVIDUAL PRACTICE IN MEDICINE

In other respects both the group action and individual conduct of physicians have differed from commercial groups. Inherited from that celebrated Greek physician of Cos, some time during the fifth century, B. C., the principles of ethics of the medical profession have set physicians apart from other groups having purely business, production, or commercial interests. It has been suggested that the medical profession has given too little consideration to some of the business phases of medicine, but by tradition, training, and experience physicians have devoted their lives primarily to human values and scientific advance and only secondarily have they considered monetary values.

To trace the rise of the present unrest over some phases of medical care, although interesting

and enlightening, would require too much time for our present discussion; suffice it to say that from many quarters of the platform and press, charges have been made that it is the responsibility of the medical profession to bring forth from the present economic system a plan to provide medical services at greatly reduced cost.

The effect of our increasingly complex social and economic structure upon the practice of medicine has prompted the medical profession only recently to apply accepted methods of economic investigation to the economics of the production and distribution of medical care.

MEANING OF MEDICAL ECONOMICS

Medical economics might be described, if not defined, as that branch of economics that deals with the production, distribution, and consumption of the values involved in medical services. While medicine must function and these services must be produced in the environment largely dominated by industrial conditions, yet the typical set-up of land, labor and capital, with their respective relations to the productive and distributive processes, is practically never found in the normal relations of patients and physicians. The practice of medicine nor, for that matter of any of the professions, does not fit into the picture of general economics.

The work of the physician, lawyer, teacher, does not in any way depend upon adding "utilities" to some sort of raw material. It is not the work of the physician to change the "time, form, or place" of the human bodies with which he works, but rather to restore them to at least a supposedly original condition of health and keep them that way.

When attempt is made to introduce other economic categories into a discussion of medical services the result is only to create confusion. Studies of medical care constantly refer to the "capital investments" of the physician or to the amount of "medical capital" invested in hospitals, laboratories, etc. The subsequent reasoning falls into a mass of confusion, through the effort to carry industrial implications of capital over into the reasoning about medical practice.

THE TERM "CAPITAL"

"Capital," as the term is used in the economics of modern industry, is an investment with the expectation of a financial return, through hiring laborers and organizing and managing a financially profitable industry. Upon this use of the word has been built the elaborate theories of economics, the implications of which can only with great difficulty be disassociated from the word. It naturally follows that most of those who use this term in discussing medicine, instead of avoiding these implications accept them, and reason as if the use of the word necessarily gave these economic theories full validity in the field of medicine.

The existence of office and laboratory equipment, scientific instruments, library, automobile, telephone, etc., in which a modern physician must invest properly to conduct his practice, involves

none of the relations, functions or implications which accompany the ownership of "capital" in the industrial sense. The physician's equipment is intensely personal to him in ownership and operation, whereas it is just the complete absence of any personal relation or ownership between industrial capital and those who use it that is most characteristic of the present system of industry. Nor, as some writers have attempted to show, is the individual practicing physician in the outgrown "household stage" of industry, from which he is inevitably destined to evolve, according to the pattern of industry into the "domestic" and ultimately to the "factory" stage of mass production. He is not "producing" for his own family, nor sending out goods into a market whose inevitable growth to national, or even world extent compels him continuously to expand.

This confusion is increased when the cost of his education is added to the physician's "capital" account. There is logic in insisting that this expense be considered in determining the cost of preparation for the profession and thereby constituting an economic check on the supply of physicians, with whatever effect that will have on incomes. This is something wholly different from classifying such costs as "capital" upon which the current rate of interest must be paid if the "firm" is to continue in business.

PERSONAL CHARACTER OF THE PHYSICIAN'S INVESTMENT

It is the personal character of the physician's investment which is significant. The owner of stocks and bonds usually never sees the property to which he has title. It may be on the other side of the world. He buys or sells it with no effect, other than financial, upon his life.

The physician's investment in education and training is a vital part of his life. Its attainment and possession affords him satisfactions entirely apart from its income producing qualities. He cannot buy or sell it in any market apart from himself. If it is outgrown or rendered "obsolescent" he cannot rid himself of it by "writing it off" some balance sheet. Because it cannot be used by anyone else it lacks the characteristic quality of industrial capital—it cannot compel the labor of others.

The real medical capital, consisting of accumulated knowledge, is stored in the minds, ideals, traditions, and in the publications of the medical profession and is shared freely with the public through universities, journals, discussions, the public press, radio, and individual consultations. This capital cannot be monopolized for profit. It does not fit into the capital concept of industrial economics, yet it is the greatest asset of the profession. Without it all physical capital would be worthless.

MEDICAL EVOLUTION CHARACTERIZED BY DISCOVERIES IN SCIENCE

Alongside of the evolution of the tools with which man has produced goods for the market, of the expansion and complexity of that market

and the organization of industry, there has been a corresponding but seldom similar evolution of the medical and other professions. This professional growth is not primarily characterized by the invention and development of ever more complex and labor-saving tools to produce for constantly expanding markets. The dynamic central element in medical evolution, so often traced by medical historians from the code of Hammurabi and the writing of Hippocrates to the present time, is found within the human mind, and expresses itself in scientific discoveries, in new applications of logic to facts discovered through the closer examination of the human body in health, disease, and after death. The significant feature of this evolution has been the steady addition of new found facts, and new explanations of already known facts, to a continually growing body of professional knowledge.

This widening and deepening stream of knowledge has followed no fixed course. It has, unlike industry, established no definite pattern of evolution. Some of the great medical discoveries came through the use of elaborate and extensive equipment. Others, equally great, were the achievement of lone workers with almost no equipment. Many searches for new contributions sacrificed their lives in the struggle.

"PROFESSIONAL KNOWLEDGE CAPITAL"

The dominance of the "professional knowledge capital" is of primary importance in the development of any program of furnishing medical service, including hospital care. Unless this immaterial "capital" maintains its dominance over the physical capital in any such program, the service itself suffers. The physical capital must remain the instrument wielded by the personal skill and knowledge.

Notwithstanding this personal element in the practice of medicine, there are certain commercial organizers and promoters and others who, sensing the universal importance of, and necessity for, medical care and utilizing the popular discussion about the *costs* of medical care are developing mass production schemes out of which they may derive a profit. Most of these schemes are too well known to need any description at this time.

MASS PRODUCTION SCHEMES

It is significant that this attempt to capture and commercialize the professions by the use of mass production methods in the marketing of medical and hospital care should appear just when industry and business are endeavoring to incorporate into their methods some of the characteristics of the professions. At the present moment, efforts to "professionalize business are being directed by trade associations, legislation, and a host of semi-public bodies and interested individuals in an effort to restrain some of the excesses of business.

COSTS OF ADMINISTRATION

The claims of organizers and promoters that only those trained in commercial organization and promotion can efficiently and economically market

medical service under these new proposals is entirely unconvincing when one examines similar endeavors abroad. In England there are today between 5,000,000 and 6,000,000 contributors to voluntary hospitalization plans. The cost of administration in these plans varies from 3 to 10 per cent. There are no paid high pressure salesmen who depend upon volume clever sales talks, misrepresentation, underbidding, and perhaps coercion in some instances, for their commissions. Nor is it by any means impossible to cite instances in the United States in which civic and relief projects are being maintained with creditable success by thousands of individuals whose primary motive is not personal financial gain.

The motive which underlies a project is one factor which often insures success or failure. It has never been shown that the introduction of commercialism in medicine accomplishes the highest ideals of the medical profession. On the other hand, commercialism usually means a deterioration of medical services and a disruption of the medical profession; either of these results are inimical to the best interests of the public.

THE CONTROL OF THE PRACTICE OF MEDICINE

Wherever the control of the practice of medicine has been wrested from the medical profession, it is found that either the public or the profession or both are dissatisfied with the result. Conversely, it is found that in those countries where the medical profession retains control of the practice of medicine both the public and the medical profession seem to be satisfied.

WHO ARE THE PROPONENTS OF THE MEDICAL REVOLUTION?

In the mad rush to provide a new method of administering medical care there seems to be an almost entire absence of demand from the working classes for this medical revolution. The worker has for years declared that were he given an adequate living wage he would be able to provide his own needs and services. Most of the schemes proposed by these commercial organizers and promoters, ostensibly for the benefit of the low income group but likewise equally important for the promoter's own selfish monetary advancement, depend upon the small regular payments from this low income group for their success. It should be clear, therefore, that it is the less fortunate class for the most part that is being called upon to contribute the 20 to 75 per cent overhead cost of underwriting administration and profits. Obviously, if 20 to 75 per cent of the poor man's dollar goes for administration and the profits of the money-greedy promoters, this same dollar cannot buy but 25 to 80 per cent of the medical service for the poor man that his money ought to buy. This surely is an economically unsound method of reducing the costs of medical care to the low income groups.

Not only is the person of low income thus deprived of the full value of his dollar, but the medical profession and the hospitals share, to a cor-

respondingly lessened degree, in the available funds collected by these commercial promoters to pay for their services. It should be clear, then, that it is the low income group, the medical profession, and the hospitals that contribute handsomely to the support of these artificial and parasitic medical schemes.

WHAT ANALYSIS OF SOME OF THE PLANS SHOWS

An analysis of the numerous proposals and operating schemes indicates that in most cases the economic principles which apply to the practice of medicine have been wholly disregarded. For example: (1) These commercial conjurers are not concerned over the fact that as the commercial interests secure an increasingly larger portion of the medical market, using only a comparatively small number of physicians to do their work, it becomes increasingly difficult for the physicians in independent private practice to secure enough patients to maintain themselves respectably. Furthermore it will become almost impossible for recent graduates in medicine to establish themselves in practice at all. (2) The disappearance of professional control is of no importance to the promoter; in fact, his scheme is often specifically designed to transfer such control from medical to lay groups. (3) Since he has no understanding of medical traditions, ethics or science, the commercial promoter is unprepared to appreciate quality of medical service, therefore the quality of the medical care, and in some instances the quantity, is reduced to conserve his, the promoter's, funds, since competent medical personnel cost him more than a less competent staff.

WHAT SHALL BE THE NUMBER OF PHYSICIANS

A further problem lies in the fact that, as the number of physicians in the United States increases, professional competition will become more keen. It cannot be stated just what number of physicians will represent the saturation point for physicians' services. Communities vary in their requirements, but with modern conveniences and equipment the same number of physicians are able to serve more people now than ever before. If professional competition is to be prevented from becoming destructive, two alternatives are open—either the number of new physicians licensed annually must be brought more closely to equal the annual loss by death and retirement, or the medical profession must develop greatly, unused fields of preclinical medicine. Certainly economic relief and professional independence for the medical profession cannot be assured by the acceptance of lay promoted commercial schemes.

ECONOMIC QUACKERY

The quack in medical economics sees in every scheme either a panacea or a poison. The scientist studies each new plan as he does a new practice or a new drug to determine its helpful and/or harmful features and how it can be utilized in existing practices and pharmacopeias.

The correct diagnosis and treatment of a medical economic problem should proceed along the same general lines in economics as in medicine. Social problems are often more complex and require no less research than those of other fields, and economics, no more than medicine, can prescribe a panacea for every disease it can diagnose.

It is three hundred years since Galileo originated the experimental scientific method of acquiring knowledge, and whole fields of thought and action still go on as if he had never lived. Economics and politics are only just beginning to follow scientific methods. But during that period of three hundred years even the very limited application of that method has added more to human knowledge and human progress than all the centuries of dogmatic rationalization.

Economic quackery in its relation to medicine flourishes best during periods of social and economic stress. During such periods the tendency to establish unsound and dangerous methods of administering medical care is greatest. It should be obvious, therefore, that all proposals to change medical practice during troublesome times must be subjected to the most searching examination in order that the time-proved principles of medicine shall not be destroyed.

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ANTIVIVISECTION *

By CHESTER ROWELL, LL.D.
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I

THE usual antivivisection bill has been introduced in the legislature, this time under the sponsorship (presumably "by request") of Senator Roy Fellom of San Francisco. It would, the dispatches say, "forbid universities, research laboratories and experimental stations from using animals for experiments or demonstrations of any kind."

This is the regular biennial attack, ostensibly on "cruelty," but actually on science. It has never passed the legislature and would be vetoed if it did. Even the periodic efforts to pass it by initiative have met with decisive defeat. Nevertheless, because the opponents of science are persistent, its defenders must be vigilant.

That the real opposition is to science rather than to "cruelty" is shown by the fact that these bills always authorize the infliction of pain on animals for other purposes, but prohibit scientific experiments even without pain. They all permit branding, dehorning, spaying and gelding on farms, without anesthetic, but forbid opening the vein of a mouse or a guinea pig in the laboratory, even under anesthesia. Most of them would prohibit feeding one rat on wheat and another on corn, to study the comparative processes of digestion. They permit the slaughtering of cattle for food and the poisoning of squirrels for protection, but they would forbid a pin-prick in a rabbit to measure the dose of insulin to save a human life.

* Reprinted from the "World Comment" column of the *San Francisco Chronicle*, March 9, 1933.

* See also editorial comment in this issue, page 379.

The "cruelty" part of the crusade is simply untrue. If the torture tales of current antivivisection pamphlets were correct, then every university president in the United States, every dean of every medical school and every doctor you personally know would be a liar. These are the men to whom we have entrusted the guidance of our youth and the safeguarding of our lives. If they were men who would solemnly lie to the world, on a matter of which they have personal knowledge and cannot be honestly mistaken, that would be worse than the "tortures" of which they are accused. Better close our colleges than have our sons and daughters corrupted by such men, and better die untreated than permit ourselves to be operated on by a surgeon who would lie about an operation on a dog. Instead, these are the very men whom we trust above all others.

The antiscience attack is the more insidious because fewer people are equipped to check its statements. The allegation is that animal experiments have added nothing to human knowledge, anyway. But careful reading will usually disclose that the real meaning is that there is no such knowledge to add to. It is impossible to deny that animal experiments discovered antitoxin and insulin, but it is possible to question whether these were worth discovering. Nobody who knows the facts, to be sure, does question it; but there are many who do not know the facts. It is possible to think that it is right to make soup of the flesh of slaughtered cattle, but wicked to make adrenalin of their glands. Absurd as it seems, some persons do think just that.

So let us get two things straight:

First, "vivisection" is not torture.

Very few laboratory experiments involve cutting, and these are done under an anesthetic, whenever it would be used in operations on human beings. This writer has had done to himself, with and without an anesthetic, practically every surgical thing that is done to animals in laboratories—the last one five minutes before this paragraph was written. And we have all inflicted on rats, to get rid of them, worse suffering than they ever undergo in laboratories.

Most laboratory experiments are medical, not surgical, and involve no more discomfort to the animals than the same diseases do to men. If one sick rabbit will save a thousand sick babies, is not that worth while?

And, second, the real opposition is to science. In a democracy men have that right. A man need not believe that quinin kills malaria or that vaccination prevents smallpox. He may even think that strychnin is not poison. But he must not, on that belief, administer it to others. Neither should he have the power, because he does not know that antitoxin cures diphtheria, to forbid the pin-pricks in horses and guinea pigs, required for production of antitoxin and the measurement of its dosage.

The democratic right not to know the truth does not alter the fact that it is the truth. The laws of nature still operate, whether you "believe in" them or not. Nobody who recognizes the existence of medical knowledge doubts that animal ex-

perimentation has contributed enormously to it. To prohibit the use of animals in the Wassermann test for syphilis would be like prohibiting the use of the microscope in examining water for typhoid. Men do have syphilis and water does carry typhoid, even if there are those who choose not to believe it.

The fact is that medical research, mostly on animals, has already banished from the earth most of the plagues that once afflicted mankind and is on the way to control the others. Even George Washington and Louis XIV were pockmarked with smallpox. Now almost nobody has it. We no longer fear cholera, typhus, bubonic plague, or yellow fever. Malaria is under control; diphtheria preventable and curable; typhoid fever possible only by neglect; and most of the other contagious diseases dwindling. Tuberculosis is understood and has become a minor factor in the death rate. Influenza is still a mystery and cancer baffles us. Some thousands of white mice are now being used in investigations to unlock its secret. Shall we make this pursuit of knowledge a crime?

‘ ‘ ‘
II*

This is more about "vivisection."

Senator Roy Fellom and numerous others write to explain that a bill recently criticized in this column is not against vivisection generally, but merely forbids the sale of condemned dogs from the pound for that purpose. The information that the bill was general came from an Associated Press dispatch from Sacramento, and the arguments then made are still good against such a bill and the perennial agitation for it. Only a part of them would apply to this separate dog pound bill. They do hold, however, against the motives of most of its supporters, whose letters show that their real opposition is to vivisection generally. They are interested in this bill as a first step.

For the dog pound bill separately, if it were separate—as it is in the minds of a few, but not of most of its advocates—there are arguments which, though not conclusive, are sincere and practical. But even these would have no force if it were not for the lurid fictions circulated by the antivivisectionists. If people knew what happens to dogs in laboratories, the humane work of the pounds in taking up stray, disabled and unwanted dogs would not be hampered by the figment of their possible "torture." It is no worse for a dog to be chloroformed in the laboratory than to be cyanided in the pound. Either fate is a mercy to the only dogs on which it is imposed. And even to meet this point no law is necessary, since any pound which finds itself handicapped by it can meet it by a rule of its own.

It cannot be too much emphasized that the first question of this whole issue is one of fact. If the things described in the antivivisection pamphlets do happen, they ought to be stopped. If the men who, of their own knowledge, say that they do not happen are liars they ought to be ejected in dis-

grace from their present positions in charge of the education of the youth of the country and the training of those who are to guard its health. The scientific aspects of the problem may be arguable (though no scientist does argue them), but the question of fact is not. These things are or are not facts, and the charge that they are facts is capable of proof or disproof by evidence. Until there is agreement that these torture tales are or are not true there is no basis of fact on which to conduct the rest of the argument.

The evidence that they are not true comes from absolutely every person who has first-hand knowledge, and whose word would be taken as conclusive on any other subject. These are the men to whom we entrust our lives and the mental and moral integrity of our children. They are authorized by law to administer poisons, to cut up living human beings, and to determine upon what knowledge and precepts the coming generation shall enter responsible life. They attend us in birth and ease us in death, and are entrusted, all our lives, with a responsibility and a confidence which we would grant to few other men. On any other question their word would be unhesitatingly accepted. And they say, on their honor, and on personal observation, that these things are not true.

The evidence on the other side is nearly all unverified and second-hand, presented by those who do not personally know whether it is true or false. Try it out yourself. Ask whichever physician you personally know to be an honorable gentleman, whose word you would take on any other subject, what he has personally seen in laboratories. Ask any antivivisection circulator of pamphlets which of the things in that literature he or she has personally seen. The answer, of course, will be "none." Read the literature itself, not on its science or antiscience, but on its sheer allegations of fact. Eliminate outright any quotation which does not state from what book it is taken, giving page and date of publication. No quotation which omits these verifactory details is worthy of credence. Actual study of many such quotations shows that the words "under complete anesthesia" have been deliberately omitted from them. Where these data are given, look them up in the original book. You will be surprised.

Examining the evidence in this way, nine-tenths of it simply disappears. What is left?

A few things. Cutting in the brain is done without anesthetic, for the same reason as cutting hair or fingernails. Hypodermic injections and vein punctures are done without anesthetic, on animals as on humans, because they hurt less than the anesthetic itself. There are authentic accounts of horribly painful experiments, in the days when human surgery had also to be done without the then unknown mercy of anesthesia. And there are a very few investigations—so rare that most men who have spent their whole lives in laboratories have never seen them—that have to be conducted painfully, on conscious animals. Such pain is inflicted a million times on farms to once in laboratories, and can be done in no laboratory without the express permission (almost never asked or

* From the *San Francisco Chronicle*, March 24, 1933.

given) of the dean. And there is the direct testimony of a few discharged laboratory workers that the doctors are liars. Evidently somebody is. There is unanimous agreement that nearly all the experiments are medical and dietary; not surgical. The surgical ones are done under the same precautions as on humans.

These are questions of physical fact, capable of ascertainment. Until they are agreed on, there is nothing to discuss on the scientific or human side. Why argue whether it is useful or ethical to "torture" animals, unless in fact they are tortured?

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DEHYDRATION IN HEAT EXHAUSTION
AND IN FATIGUE

By C. VAN ZWALENBURG, M. D.
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THE need of an adequate supply of water for the physical well-being of the body is being more and more appreciated during the last few years. The work of Roundtree¹ and of Newburgh² have added greatly to our knowledge of what has been called the "water balance." Evidently the most important phase of the balance is to keep the body adequately supplied with water, as an ordinary oversupply is easily taken care of by the automatically increased urinary output. The promptness of this response is common knowledge among beer drinkers and should be more frequently acted upon when we look for a diuretic.

WATER THE GREAT DIURETIC

Water has only recently demonstrated its prime position as the greatest diuretic we have ever had. It is only lately that we have recognized the fact that most bladder irritations, scalding and burning at micturition are due to a lack of volume in the urinary output. During the hot weather scores of patients go to the doctor with these irritations. That they are due to urinary concentration on account of low water balance is demonstrated by the promptness with which they disappear when the patient takes an adequate supply of water. This fact seems almost too obvious to have been missed so long.

How many centuries of wasted diuretics have we been guilty of and how very recent is the knowledge that water is the supreme and practically the only real diuretic. Should not every layman, much more every doctor, know that one cannot get water out of a body without putting it in? How many dollars have found their way to the doctors' pockets because of scalding, irritating urination, when summer heat dehydrates the body and people fail to heed the automatic call for more water? Many of these patients have been given soothing diuretics and nostrums without number. The bladder has been washed, cystoscoped, probed, and treated. Up to ten pounds of water is lost by perspiration in one day. How many persons realize that pounds of water must be taken to replenish these amounts? Think of two to three quarts of water intake and less than

a pint of kidney output in one day on the desert. It is generally recognized that the circulation is much more comfortable and efficient when the blood vessels are well filled. Starling's³ law of the heart for the greater efficiency of the stretched heart muscle over a full cavity has had its accuracy demonstrated in many observations and studies. As a farmer said to me the other day, "I drink plenty of water because I think the heart will do better work when it has something to work upon." "The blood volume must be maintained" has become a slogan in all departments of medicine.

The most obvious instances of loss of volume have received exhaustive study during the last few years. Hemorrhage and shock from injury probably take first place. Surgeons have recognized the need of water here and have developed a very efficient method of replenishing the supply with transfusions and with intravenous and subcutaneous injections. In these conditions the relative amount of fluid volume is more easily evaluated, although here and elsewhere it would be a tremendous boon to have a simple and reliable method of estimating the actual amount of fluid volume present in our patients at any one time.

The lack of blood volume following diarrhea, cholera, and other depleting diseases is receiving attention. We are also beginning to study the problem of an adequate intake of water generally—in health and in disease. More and more we are urging our patients to drink freely. Still more emphasis should be placed upon this advice.

This paper hopes to create more interest in the third major avenue for the escape of water from the body—the skin. Transpiration, perspiration, and evaporation are the great unnoticed causes of dehydration.

TRANSPIRATION

This is the greatest factor in the control of water balance and is of paramount interest in the study of heat exhaustion and fatigue. The accompanying table furnishes a picture of the average of intake and output in maintaining the water balance in the body.

TABLE 1.— <i>Water Balance*</i>	
<i>Water Intake</i>	<i>Grams</i>
Drinking water	300
In coffee, milk and soup	580
In solid food	720
From oxidation of 100 grams of protein	41
From oxidation of 100 grams of fat	118
From oxidation of 244 grams of carbohydrate	135
	1894
<i>Water Output</i>	
In urine	750
In feces	300
Vaporized through skin and respiratory tract	700
	1750
* From Du Bois. ⁴	

Note that the amount vaporized is practically equal to the output from the kidneys. It takes no longer than one day on the hot desert to demonstrate that the water vaporized through the skin and respiratory tract will become several times the amount of urine excreted. This becomes evident when studying the enormous amounts lost by

perspiration in hot industrial plants, among the stokers of coal-burning vessels, in hot mines, in fact in any occupation which calls for excessive muscular exercise.

STORAGE RESERVOIR

Approximately 75 per cent of the body weight is water.¹ A large part of this volume is held in the tissues, which act as a storage reservoir. The intercellular spaces, as well as the cells of the body, constitute this reservoir. This is the supply called upon promptly in hemorrhage, excessive perspiration, and the ordinary needs of the body. In ordinary surgical shock much of the fluid volume of the blood, instead of simply concentrating in the large veins, also escapes into this reservoir and for some reason fails to make its usual return into the blood vessels when needed.^{1,5} One of our problems is to keep this storage reservoir filled.

CONTROL OF TEMPERATURE

In the regulation of the temperature of the body the most important factor is the water balance. Normally this goes on automatically and the loss of water is supplied through the sense of thirst, which calls for more water when the supply runs low. This automatic response to the sense of thirst normally suffices to fill the storage reservoir throughout normal animal life. However, it does become necessary often in the treatment of disease to supplement artificially the amount of water intake to maintain an adequate supply. The sense of thirst is sometimes insufficient or may be ignored, or there may be inability to secure water, to drink it, or retain it.

The normal metabolism of the body—the combustion of food substances by the oxygen taken in—constantly produces heat in the body,⁶ and when we remember that the normal temperature of the body is 98½ degrees Fahrenheit it becomes obvious that very adequate mechanism is required to regulate the amount of heat produced and the amount of heat lost. This process is looked upon as very complicated, but many of the factors are very simple, the most important one being the control of the circulation in the skin. Cold contracts and heat dilates. Vasomotor control and heat-regulating apparatus have been sought for and found in the medulla, but the principal ordinary control is the direct effect of heat upon the skin. Heat causes dilation of the blood vessels and cold causes contraction, thus regulating the loss of heat.^{7,8}

HEAT LOSS

Heat is lost from the body by direct radiation, convection, conduction, and evaporation; but in the presence of excessive heat the greatest dependence is upon evaporation from the lungs and skin. Smith⁹ found that under average conditions the heat loss by radiation, conduction, and convection from the skin is two or three times the amount lost by evaporation. Wiley and Newburgh² found that under conditions of high temperatures the amount lost by evaporation with sweating is very much more, and, obviously, is often enormous.

EVAPORATION

All investigators emphasize the fact that, in the final analysis, lowering of body temperature in excessive heat is dependent upon the evaporation of water from its surface. Water passing from a liquid to a gas (vapor) takes up heat from its environment. Thus heat is taken from the body, thereby cooling it.⁵ It is the same process which cools water in the Spanish olla. The dry desert wind, passing over the moist porous jar, evaporates water from its walls, and the heat of evaporation coming from the jar and its contents cools the water in it.

Haldane¹⁰ says: "Evaporation permits the body to tolerate temperatures which would otherwise be totally incompatible with life." In the absence of evaporation, he places the upper limit of safety at 88 degrees Fahrenheit if at rest; at 78 degrees Fahrenheit if working in still atmosphere. Above these temperatures some evaporation is essential. When the environmental temperature reaches blood heat, evaporation must play the sole rôle of stabilization.

HUMIDITY

A high humidity of the surrounding air adds greatly to the difficulty of keeping cool on account of the lack of evaporation. Heat exhaustion on the desert is relatively rare because of the speed of evaporation in the dry air. A combination of high temperature and high humidity may bring on profuse perspiration; but there being no evaporation a rapid depletion of fluid takes place without adequate cooling.^{10, 11, 12, 13} A 100 per cent humidity with 100 degrees temperature could be endured but a very short time because there could be no cooling since there could be no evaporation. Something approaching this must have been the condition in Peking in 1743, when eleven thousand are said to have died in one week.

LOWER BLOOD PRESSURE

After exercise blood pressure rises to meet the call for the support of muscular activity and heat dissipation by evaporation; but when the stage of exhaustion is reached, inadequate blood volume and failure to respond to this call results in a fall in blood pressure: thus, 118 to 96, 110 to 92, 116 to 80.^{9, 11, 14, 15, 16, 17, 18}

PERSPIRATION—WATER LOSS

The loss of heat being so largely the result of evaporation, the amount of water lost by perspiration keeps pace with the need of lowering the temperature of the body, and an estimate of the amount of water lost by sweat becomes significant. Many careful estimates have been made, and the amounts are often enormous. Haldane¹⁰ reports the following from an account by Dr. A. E. Boycott on visiting mines in England: "As you know, the men are reported to wet the drill holes by pouring the sweat out of their boots." The amounts recorded under various conditions of temperature and humidity range from one liter an hour in extreme conditions to forty grams per hour in ordinary room temperature.^{4, 6, 16, 19, 20, 21, 22, 23}

CHLORID LOSS

With profuse perspiration there is excessive loss of chlorids which are so necessary in the metabolism of the body.^{9, 23, 24} This problem has had careful study, and the necessity of replenishing these chlorids in all forms of dehydration has been properly emphasized.

MECHANICS OF EXHAUSTION

The obvious result of this excessive loss of water is to lower mechanically the blood volume, producing a condition almost identical to that following hemorrhage or surgical shock. The sense of exhaustion is due to the difficulty of the circulation maintaining an adequate blood pressure in the nerve centers. We know that unconsciousness follows a sufficient drop in blood pressure. The sense of well-being depends upon constant blood pressure. Exhaustion is one of the first evidences of loss of blood, faintness, deprivation of food and drink, and shock, inadequate volume in the blood vessels. Fatigue for the same reason is in large part a sense of this approaching exhaustion from lack of fluid in the blood vessels. As a demonstration that this loss of water is the cause of fatigue and a sense of exhaustion, I have with great satisfaction made the following simple test. After excessive perspiration following eighteen holes of golf on a hot day or a strenuous two or three hours in the operating room, I have repeatedly taken a couple of glasses of water, reclined on a couch for ten minutes until the water was absorbed and have then been able to slip into the continued duties of the day, feeling entirely rejuvenated and fit to go on. The fatigue is overcome by the simple process of filling the blood vessels after the supply there and in the storage reservoir has run low.

CYANOSIS

During the later stages of heat exhaustion there is usually cyanosis, which often persists after death. During an aggravated heat spell in New York in which the victims were too numerous for the beds in the New York Hospital, deaths were so numerous that funerals were delayed, and a large number of corpses accumulated.²⁵ A casual look by a visitor brought the report, "Why, they are all negroes." It was the cyanosis which persisted postmortem.

It may have been this same period of severe heat of which Lambert²⁶ writes: "The unconscious patients presented a striking picture. Their skins were dry, hot, and flushed; or cool, pale, and livid; or cyanotic, with a clammy perspiration. Many with a temperature of 108 degrees Fahrenheit did not regain consciousness at all, and though the temperature came down the pulse remained frequent, dyspnea and cyanosis often being marked, and such finally died."

The cyanosis and the flush of dilated blood vessels on the surface have misled us into thinking that the flagging heart was laboring against a plethora of blood and we have resorted to bleeding. Osler's "Practice of Medicine,"²⁷ says the life of S. Weir Mitchell was saved from this condition

by bleeding. As a matter of fact, just the opposite is true. The heart is laboring with empty arteries, for all the blood is attracted to the dilated capillaries and veins on the surface of the body by the normal process of cooling by perspiration and evaporation. Not enough remains in the deeper arteries and veins to maintain adequate blood pressure. The blood volume has been lost through the skin. The depleted supply is still being used for the desperate need of cooling the body from the heat which is destroying it. Again I say what a boon it would be to have a satisfactory method by which to measure blood volume in the body. Introduce 1,000 to 2,000 cubic centimeters of normal saline or 5 per cent dextrose into the veins and see how promptly the perfectly normal heart takes up its work.

PATHOLOGY

The pathology of heat exhaustion is that of dehydration. Wall and Wakefield:²⁸ "The major change was rigid contraction of the left ventricle, and venous congestion of all the veins in the body." Prudden and Delafield²⁹ refer to H. C. Wood, Jr., calling attention to the rigid condition of the wall of the heart. Osler and McCrae:²⁷ "The arteries seem to empty themselves and send the blood to the periphery."

CASE REPORTS

The following cases illustrate exhaustion as the result of dehydration.

CASE 1.—I attended O. L. about 1922 after he had been relieved from the Navy, where he was serving as a cadet at Annapolis. He was a young man, aged 20, near the close of his first year at Annapolis, making his first cruise which took him from Baltimore to Honolulu. He writes as follows:

"In thinking over what happened to me, in the light of this idea (dehydration), the following recollections may interest you. The cruise was from Annapolis to Honolulu. I was assigned to the engine room from Annapolis to Panama, and to the boiler room from Panama to Honolulu. The temperature in both rooms was high, and got higher as we reached the tropics; moreover, the boiler room was under a forced draught. I should guess that the temperature there was between 120 and 130 degrees Fahrenheit. There was little physical exertion in the engine room, but in the boiler room I was working as a coal passer, which meant lugging cans full of coal from the bunkers to the furnace door. These cans were about the size of a large ash can. As I recollect, the first stage of the trip brought us little serious discomfort aside from mild seasickness. However, the water they gave us was distilled water, and I remember getting very sick of it. It tasted heavy and flat, and although I wanted to drink it, toward the end of the trip it began to nauseate me. Therefore, for several days prior to reaching Panama, I probably did not drink enough water. However, I felt well enough, and spent one day on shore leave at Panama. I remember a craving for fruit, and that I ate nearly a whole pineapple.

"After leaving Panama I lasted three or four days in the boiler room before I finally collapsed. I remember that my feeling toward the water increased in violence during this time. I craved a lot of it, yet I hated the stuff because it tasted so flat. My stomach was so upset that I ate very little food. I do not remember any specific craving for salt at the table.

"After I finally collapsed they assumed that I had influenza, presumably because of a high fever. However, there was no attempt to give me more water. In fact, I think I got even less than usual, perhaps only two or three glasses a day. I remember that for

breakfast and supper they always gave me a cup of cocoa. I had a craving for orange juice or fruit juice of any sort, but there was none available. It certainly looks as if dehydration and lack of a proper salt balance were factors in the case."

1 1 1

CASE 2.—W. G. F., aged 67, collapsed from heat exhaustion in August, 1931, after a morning spent walking many miles through his orange grove in a temperature approximating 115 to 120 degrees Fahrenheit. He was unconscious, pulseless, cyanotic, and breathing heavily. When I saw him at the hospital twenty minutes later, his consciousness had partially returned. His pulse was very feeble, rate 50, blood pressure, systolic 96, and diastolic 60. He was immediately given intravenous injection of 1,000 cubic centimeters of a 5 per cent dextrose solution. This brought about a very prompt reaction, so that within one-half hour he was in a fairly normal condition. He took water by mouth very freely thereafter, and by morning, seventeen hours from onset, the total taken was 3,640 cubic centimeters plus the 1,000 cubic centimeters given intravenously, a total of 4,640 cubic centimeters of fluid. During all this time there was an output of urine totaling 450 cubic centimeters, showing the tremendous depletion of his storage reservoir. His total excess of intake over output must have approximated the total blood volume in his body. He continued to improve very rapidly, and was able to leave the hospital forty-eight hours after admittance, practically well, and has remained so.³⁰

This is the patient whose condition instantly suggested dehydration with the obvious treatment. This case was reported in the *Journal of the American Medical Association*, 1931.³⁰ After careful search I failed to find the record of a similar use of this method by anyone before.

1 1 1

CASE 3.—Dr. J. C. King, former president of the California Medical Association, writes: "Many years ago the Southern Pacific Company ordered new rails laid across the desert, in July and August. Soon cases of sunstroke appeared. I cared for as many as a dozen in one twenty-four hours. The camps were supplied with a tank car of water from Indio, one each week. The water would be subject to a temperature from 120 to 140 degrees Fahrenheit each day. It soon became rotten and unpotable. I ordered a car of water to each camp each day. The foreman refused to obey the order. I appealed to the superintendent in Los Angeles, but he claimed no authority. I carried the same to San Francisco, and then to New York before I could obtain what I wished. As soon as fresh water was supplied daily, the cases of heat prostration diminished and, in about a week, ceased. The foremen were supplied with ice and used water freely. The laborers were not given ice and used water sparingly because it was so nasty."

TREATMENT

In the face of all this evidence of dehydration the treatment of heat exhaustion in any of its various forms, and of the preliminary fatigue as a result of dehydration, obviously consists in the administration of water. Fortunately the apparatus is now available in practically all hospitals, and the methods are well developed to administer water hypodermically and intravenously in the urgent cases. One thousand cubic centimeters of saline solution or five per cent dextrose intravenously is the prime indication in the really depleted patient. The method is the same as that used to overcome surgical shock and needs no detailed discussion. The *American Journal of Surgery*³¹ gives an excellent summary of various methods. As soon as the patient is able, copious drafts of water should be given.¹⁷

As a preventive measure, we must constantly urge more water—drink more.

Industrial plants are giving considerable attention and health authorities are pushing the campaign to supply an adequate, wholesome, palatable, and convenient supply of water. From the standpoint of heat exhaustion, fatigue, and shock, it would be hard to overestimate the importance of this movement. Various amounts have been recommended, but for the average individual under moderate strain of mental and physical exercise, six or eight glasses per day is ordinarily needed. Under conditions of extreme heat such as encountered by workers in steel mills, foundries, hot mines, or in the holds of coal-burning vessels, two or three times more is required. The experience of Hunt³² in India in desert conditions would indicate an amount up to thirteen liters as desirable. He says that the common consumption of water in India is thirteen liters a day.

CONCLUSIONS

1. We have reviewed the literature carrying the growing accumulation of evidence that dehydration is the important factor in heat exhaustion, and have illustrated the application of this principle.

2. The study of fatigue shows that dehydration is a large factor, especially in the face of copious perspiration.

3. In acute heat prostration, intravenous use of water, saline or dextrose, is a life-saving procedure.

4. An abundant, convenient, and palatable supply of water should be a first concern for all workers in hot, humid environment, brain workers as well as muscle workers.

5. Most people need the advice: Drink more water.

Glenwood Block.

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FOCAL INFECTIONS*

IN RELATION TO CARDIAC AND VASCULAR DISEASE

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DISCUSSION by William J. Kerr, M. D., San Francisco;
Charles Miner Cooper, M. D., San Francisco; Fletcher B. Taylor, M. D., Oakland.

THE purpose of this paper is to draw perhaps more forcibly to your minds facts long since known and to make, at the same time, a plea for more thorough and intelligent handling of focal infections which may be of the greatest consequence to the patient's future well-being. The impression which I get in reading a number of the more recent books on heart and vascular diseases is of the rather casual way in which the relationship of focal infections is treated by the authors, though they mention quite commonly that such relationship exists.

* Read before the Alameda County Medical Association, January 16, 1933.

CAUSATIVE ORGANISMS IN ENDOCARDITIS

Thayer, in 1925, from a study of 199 cases of acute and subacute bacterial endocarditis, supported by 138 autopsies, gives the following causative organisms:

PER CENT		PER CENT	
Streptococcus	57	Gonococcus	11
Pneumococcus	14	Influenza	4
Staphylococcus	13	Staphylococcus albus	1

In acute pericardial disease, Preble reported 244 cases divided as follows:

PER CENT		PER CENT	
Pneumonia	34	Sepsis	4.7
Rheumatic fever.....	28.4	Typhoid	1.7
Nephritis	11		

He does not mention the cause of the nephritis, probably mostly secondary to infection elsewhere. Rheumatic fever is coming to be rather generally accepted as due to a streptococcus; so that, if we eliminate pneumonia and typhoid, sepsis, rheumatic fever and nephritis furnish 64.3 per cent of his total.

White states that infectious aortitis, besides that due to syphilis, is also occasionally found as an acute lesion in rheumatic fever, typhoid, and tuberculosis; and further states that endarteritis may result from the same group of infections mentioned in Thayer's table.

He also says that in the treatment of aortic disease there is no effective treatment for atheroma, but "avoidance of overexertion and overeating and protection against infection are advisable."

Speaking of the treatment of angina, the same author states: "Finally, there may be some special disease like syphilitic aortitis or a focal infection, the treatment of which results in abolition, at least for the time being, of the angina pectoris. Such trouble should be looked for and treated, but excessive zeal in therapy is to be avoided; too much surgery or medicine or tooth-pulling may do much more harm than good."

FOCAL INFECTIONS IN RELATION TO MYOCARDIAL DISEASE

In discussing focal infections in relation to myocardial disease in particular, White and others take the stand that they may aggravate already existing heart disease, and that such conditions as chronic cholecystitis, prostatitis, pyelitis, infection of gums, apical abscesses of teeth, sinusitis, etc., appear to be responsible for relatively unimportant disorders of cardiac rhythm, in particular extrasystoles of premature beats. White states that measures looking toward the elimination of such foci "are usually justifiable (if the circulatory condition permits) and may relieve the patient of his temporary state of ill health, or at least cause improvement." He warns against removing more than a few infected teeth at one sitting, and concludes that "the wisest course, then, is to view focal infections, so far as the heart is concerned, neither with overmuch fear nor with excessive disregard, etc." All of which leaves us with a very indifferent attitude toward the problem and its importance.

I grant that I have not seen any brilliant cures of bacterial acute endocarditis as the result of the

elimination of focal infections. Of the subacute variety, on the other hand, a number of instances have come under my observation which apparently did result in cure of the infectious process, with good heart function, though of course valvular defects persisted. I have further seen angina, in one case at least, disappear, not to return as yet over a period of four years following a tonsillectomy in an edentulous individual; and another patient has now been free for about seven months as the result of cleaning up infected teeth. I have often seen not only extrasystoles but really marked arrhythmias cease after removal of focal infections and a definite improvement in myocardial damage of long standing.

If focal infections can be responsible for arthritis, or myositis or neuritis, for cholecystitis, pancreatitis, etc., I can see no reason why the myocardium, endocardium, or pericardium should be exempt or why the vasa vasora of the greater vessels should not be the ultimate destination of infectious emboli, resulting in a scarification of vessel walls, particularly the media, with resultant loss of elasticity or arteriosclerosis.

FOCAL INFECTIONS AND OLD AGE

In fact, my conception of old age is largely a matter of the degree of focal infection which a given individual has harbored during his lifetime. Premature old age means many focal infections in many instances. I am not unmindful of the effect of dysfunction of the glands of internal secretion, but I question if they, too, have not often been the seat of secondary or metastatic infections, just as one may see an acute thyroiditis following a streptococcic throat and, on recovery, find his patient ultimately with a deficient thyroid.

NATURE OF INFLAMMATION

Inflammation is the same in every tissue of the body. First, the lodgment of the irritant, followed by congestion of the vessels with accumulation of leukocytes and the ultimate breaking down or organization into scar tissue. Rubor, calor, tumor, and dolor are still the cardinal symptoms. Place it where you will, the results in any given location are dependent only upon the physiologic function of the part involved and the degree of impairment resulting from the inflammation.

WHERE ORIGINAL FOCI ARE FOUND

Original foci are, probably as much as 90 per cent, to be found in the head: teeth, gums, tonsils, and sinuses. The surgery of tonsils is simple in that it undertakes at once to remove completely the diseased tissue. The treatment of sinusitis is not so simple. If the antra alone are the seat of chronic infection, probably the results are best, for the thorough removal of the infected mucosa is possible. With ethmoidal, sphenoidal or frontal involvement, the problem becomes extremely complicated and, perhaps, the most one can look forward to is good drainage to prevent absorption. And if good drainage is established the use of vaccines, etc., offers the possibility of at least desensitizing and, perhaps, immunizing the patient.

With infected teeth, the opportunity to eliminate completely the given focus is as brilliant as in the case of tonsils; but there is much to be said about the method, for the average extraction of an infected tooth is about the most unsurgical procedure that we meet with in the daily round. I make this statement not in unfriendly criticism but only to call attention to the fact, and to solicit the coöperation of the dentists in properly removing a focus of this type.

A periapical abscess is nothing more nor less than an osteomyelitis of the jaw bone, and its surgical treatment should be the same as that of an osteomyelitis of the tibia or femur or any other bone. What surgeon would dare to open up the tibia, curette, and then calmly stitch up the overlying tissues or even to tightly pack the curetted pocket? Yet this is common practice in dental surgery. Obviously the procedure makes for a retention of infection, an incarceration of bacteria which may be as bad as the original periapical abscess or even worse. This happens so frequently that it has led to the coining of the term "residual infection," an admission of the incompleteness of eradication of the infected area. And let me say in passing that the search for a focus of infection should never fail to include the edentulous portions of the jaws.

The only fair and just estimate of the value of removing a focus of infection is actually and thoroughly to remove the seeding focus. To remove a tooth involved with periapical disease and then sew the gums together, or even permit an early plugging up of the socket with an organized clot, is only half doing the job. This clot should be removed daily and the socket irrigated with hypertonic saline or Ringer's solution for a period of several weeks, depending on the extent of the osteomyelitic process, but in no event less than three weeks. Granulations springing from the gums should be removed in order to avoid incarcerating the infection, and only when the socket ceases to be sensitive to instrumentation, should it be allowed to fill in slowly from the bottom.

IN CONCLUSION

A final word about focal infections: The term has come by common consent to signify only certain conditions of seeming secondary importance because many of the end-results do not show a definite clinical disease entity, like syphilis, for example. Yet this disease is the most thoroughgoing classical picture of a focal infection in the acquired form. Endocarditis, pericarditis, and myocarditis, as complications of acute infectious diseases, are typical secondary infections. The examples could be multiplied indefinitely.

Obviously, more is to be hoped for in a prophylactic way before a secondary is established, but the elimination of a primary seeding focus is never too late to be helpful.

I have not given much space in this necessarily limited paper to such foci as infected gall-bladder, pyelitis, and prostatitis for two reasons: (a) they should really be classified as secondaries, though where the primary original focus has disappeared

they are (b) usually significant enough of themselves to receive treatment. Also I believe that the colon frequently is the primary focus when its mucous membrane becomes eroded; but here again removal is impossible as an entirety while smaller portals of entry may have healed long before the secondary becomes manifest.

In conclusion, let me ask your more earnest attention to these more commonly known foci—first noted by Benjamin Rush, but so insistently called to our attention by the brilliant Frank Billings—and to ask you to try to be sure that their removal is complete before judging of the value and importance of the procedure.

230 Grand Avenue.

DISCUSSION

WILLIAM J. KERR, M. D. (University of California Medical School, San Francisco).—This paper of Doctor Strietmann's calls attention to the importance of foci of infection when dealing with secondary involvement in various parts of the body. There can scarcely be any doubt that foci of infection are important in the causation of certain diseases in different structures and organs. We cannot be so certain, however, that the removal of these foci of infection, after the secondary process has developed, will do very much to eradicate this secondary involvement.

However, I think it is quite certain that if definite foci of infection are allowed to remain, the same tissues may suffer from repeated assault, either from the presence of soluble toxins in the blood, or from the dissemination of bacteria either to the secondary lesion which has been set up or to some other part of the body. It would seem rational to remove definite foci of infection whenever they may be found, irrespective of the presence of any secondary lesions.

For many years I have been struck by the frequency with which foci of infection arise in patients suffering from endocarditis, rheumatism of the infectious type, and other secondary involvements, long after these secondary disturbances have developed. It is quite likely that the reduced general resistance seen in many patients with chronic disease tends to predispose to further local disturbances which we classify as foci of infection. I would not for a moment hesitate to remove a nidus from the alveolar process, in the sinuses or in the tonsils in such cases; but I would not be so certain that the condition had existed there before the secondary manifestations arose in the heart, joints, etc.

In many patients with chronic disease it is, I think, of great importance to try to maintain the general health and condition of the patient by proper rest, diet, tonics and other measures. One may use vaccines in treatment which tend to improve the general circulation, and which possibly may enhance the protection through immunological processes.

The author speaks of cures in cases of subacute bacterial endocarditis which do not correspond with my experience and that of many workers in this field. Once the diagnosis of subacute bacterial endocarditis is established on the basis of the general clinical picture plus a positive blood culture, the prognosis is practically hopeless. However, one sees pathologically a few specimens which indicate that there has been a long-continued process which may be caused by these organisms, with scarring in the valves, side by side with an active lesion of an infectious nature. It is probable that if we could classify these conditions, as we are inclined to do at times, we would find that there is a small but definite group of patients who have subacute bacterial endocarditis over a period of many years before they develop the full-fledged picture of septicemia and the embolic manifestations. In going back over the histories of some of our patients who die of subacute bacterial endocarditis and reviewing the pathologic findings, we are convinced that, years before, they had an active process with em-

bolism to various organs which quieted down and seemed to get well. I have observed clubbing of the fingers in these patients for ten years before a diagnosis of subacute bacterial endocarditis was proved. I do not think that any treatment which we have ever used has been of any special value in handling these patients.

There has been much discussion about the value of removing foci of infection in patients who have angina pectoris and other myocardial disturbances and irregularities. It has been my feeling that many such patients were definitely improved by removing the foci of infection; but I have taken the attitude that foci of infection should be removed for their own sake and irrespective of whether they will definitely clear up the cardiac condition or not.

The results from removal of the tonsils and other foci of infection in children with rheumatic heart disease has, I think, been on the whole rather disappointing; but there seems to be some evidence that early removal of tonsils before rheumatic infection has developed may tend to prevent this occurrence in a number of instances.

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CHARLES MINER COOPER, M. D. (2000 Van Ness Avenue, San Francisco).—It has been my notion that any undraining focus of infection is a potential menace to its carrier. It is true that it may lie latent and perhaps never do any harm. On the other hand, I have seen numerous cases in which in later years conditions arose which were relieved only by the eradication of the foci.

Most physicians nowadays are with Doctor Strietmann in accepting that the so-called rheumatic manifestations are largely of organismal origin, and we repeatedly see cases of indurative headache, "lumbago," or periarthritis that clear up in an astonishing way after the removal of some focus.

The retina is a highly specialized structure and it is open to inspection. It may exhibit lesions which at first sight appear to be indicative of a grave condition, and yet these may entirely disappear after the removal of a focus of infection; and it is only through the repetition of a number of such sequences that we feel justified in accepting that the focus was the cause of the lesion.

In our complement fixation work we meet with a Wassermann-fast case. The patient has been well treated by doctors versed in that particular field of therapy. A focus of infection is found and eradicated. The serum reaction quickly becomes negative. Here again it is only the repetition of such checked occurrences that carries conviction.

It is difficult, then, to believe that the cardio-vascular or any other system is endowed with a power of defense that will altogether protect it from a disease agent that can affect skeletal muscles, fibrous tissues generally, a specialized structure like the retina, and even immunologic responses.

In bacterial endocarditis with blood stream infection, the organisms have invaded relatively non-vascular structures which cannot be removed or even given rest. When this has happened, one should not expect any benefit from the removal of foci of infection; and I regret to have to say that nothing which I have been able to do has been of service in any of the relatively large number of such patients whom I have seen.

Most patients with angina pectoris present evidence of degenerative changes in the cardiovascular system, with an accompanying lessened functional capacity. With proper conservation of the damaged structures, many live for years, and in some the seizures cease. It is difficult to evaluate the part played by any one component of a system of treatment which has been advised with this in mind. In a small number the removal of a focus of infection has seemed to have been of prime importance, in others salutary, while in others it has played at least but a minor part.

In the arrhythmias, I, like Doctor Strietmann, have seen striking improvement occur subsequent to the removal of foci.

Perhaps I may add that:

1. We can never be sure that we have rendered an individual "focal infection" free, *e. g.*, once the dentine of a tooth has suffered from decay, its tubules have been invaded by organisms. They may remain permanently there, and I recall a number of patients in whom the most striking results followed the removal of an infected living tooth, which was located by the patient and not by me.

2. Most persons carry multiple infections. Even in those cases in which we are convinced that a particular condition is of focal infection origin, we are often unable to say which focus is at fault; and it has often happened that relief came only after the removal of the focus that was left to the last. A succession of such mutilations as the removal of all foci entails is distressing and not without risk to the patient. One must therefore weigh the benefit that can be expected to result against the distress and danger to be run, and advise accordingly.

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FLETCHER B. TAYLOR, M.D. (400 Twenty-ninth Street, Oakland).—The capacity which any profession possesses for development depends upon its ability to coordinate the salient advances of allied sciences with itself. This may be called its "borrowing power."

The medical profession, more than any other, has need of scientific "borrowing power," and in our approach to a problem in focal infection it is necessary for us to "borrow" a judicial quality of mind which will enable us to weigh with unprejudiced attention several parallel lines of evidence at one time.

We are all well aware of the fact that no formula for medical procedure is infallible. There is some danger in habits of thought with reference to the treatment of focal infections. If the best service is to be delivered to our patients, we must be able to view impartially the new facts given us by research confrères, at the same time remaining conservative in their application.

In the consideration of focal infection there are three major opportunities which may bear emphasis: first, the frank focus which is found in the routine examination of an otherwise healthy patient presents an excellent opportunity to prevent disease; second, the demonstrable focus in a young rheumatic patient is of importance if we want to protect that patient from bacterial endocarditis; third, and this is a matter for careful appraisal and conservative approach, the removal of inflammatory foci in chronic cardiovascular disease of the aged. Here more often supportive medical treatment is needed; less often, the surgical attack upon a focus of infection.

It is essential that before treatment is directed toward any one focus that all the foci be recognized. In this way a needless waste of money, time, effort, and even life may be avoided. Having found one or more foci in an individual we may then direct the therapeutic attack with proper consideration of accessibility of the focus, expense of treatment, and danger to the patient. The tonsils of a patient must not be removed while an alveolar dental abscess is overlooked. Deep-seated foci, expensive or dangerous in treatment, should wait for the clearing of superficial foci.

Those foci which have no drainage portals except by lymphatic channels or the blood stream are most important to the problem. Doctor Strietmann's plan of complete surgical attack on the dental focus is particularly stimulating to me. The work begun must be finished. The sigh of the surgeon who has just extracted an abscessed tooth should not be a sigh of satisfaction. The extraction is the beginning, not the end, of the treatment.

In general it is wise to avoid the sins of omission which are born of medical laziness or the patient's ideas of false economy. Thoroughness should be the keynote of the entire process. And, above all, it is our duty to be completely frank with patients in these as in other matters. We cannot make absolute promises and we must not appear to do so for the sake of

medical argument and medical spoils. When we do we are faced with a focal infection in our own professional ethics.

✽

DOCTOR STRIETMANN (Closing).—I must grant, with Doctor Kerr, that subacute bacterial endocarditis rarely results in cure. However, I have seen three such, in two of which large localized abscesses developed. One in the left thigh and another in the right scapular region. The pus was sterile in both instances. It makes me think of the possible advisability of inducing fixation abscesses by injecting turpentine, etc.

With Doctor Cooper, I realize that it is difficult to evaluate the part played by removal of a focus in angina pectoris, but I should like to add that it is equally difficult to say that, particularly when of dental origin, the focus has been definitely and completely removed. A pulp-stone is just as likely to be the result of a metastatic infection as a gall-stone, and I know that such apparently healthy teeth do at times yield a streptococcus.

As Doctor Taylor remarks, the removal of the infected tooth is but the beginning of the surgical procedure for the eradication of this focus, and it is this particular feature which is the burden of my remarks. When we are definitely certain that such a focus has been removed in its entirety, only then may we evaluate the part played and deduce with more reason the dependence of the condition at hand upon the focus removed.

ONCHOCERCOSIS IN NORTH AMERICA*

By HERBERT G. JOHNSTONE, PH.D.

AND

ALBERT E. LARSEN, M.D.

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DISCUSSION by John F. Kessel, Ph.D., Los Angeles;
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AN interesting disease exists in parts of Guatemala and Mexico, sharply limited to an area several hundred miles wide, extending from the slopes of the volcano Fuego, in Guatemala, north along the mountain range of the Sierra Madres, into the states of Chiapas, Oaxaca, and Guerrero in southern Mexico. This infected area has an average elevation of from two to four thousand feet.

PARASITIC NATURE OF DISEASE

The parasitic nature of the disease was first established in America by Robles in 1916. Calderón (1917) recognized that the common condition, known locally as "erisipela de la costa," was always associated with the presence of nodules located about the head and neck. These nodules were found to contain adult filariae, which were subsequently identified by Brumpt (1919) as a new species of *Onchocerca*, which he designated *Onchocerca cecutiens*. Subsequent workers, including Fülleborn, Pacheco-Luna, Hoffman, Ochoterena, Blacklock, Blanchard and Laicret finally developed the complete clinical picture with its etiology, transmission, and treatment. Strong of Harvard, in a recent field study of the condition, made many valuable contributions while

* From the Pacific Institute of Tropical Medicine within the Hooper Foundation of the University of California.

* The list of references and additional illustrations will be given in the reprints.

bringing the disease to the attention of physicians in the United States.

Onchocerca cæcutiens Brumpt, the causative agent of American onchocercosis, belongs to the family Filariidæ, subfamily Filariinæ. In the Filariinæ are found many of the filarial worms infecting man, including such forms as *Wuchereria bancrofti* (causing elephantiasis), *Loa loa* (causing Calabar swellings), *Acanthocheilonema perstans*, and the American and African members of the genus *Onchocerca*.

O. volvulus, occurring in Africa, resembles closely *O. cæcutiens*, the American form. Brumpt described the latter species, but due to the similarity with the African form the validity of the differentiation is still in doubt. *O. cæcutiens* is given separate specific classification in that it is found at very high altitudes, localizes on the head and neck region, produces resorption of bone, and has pathogenic sequelæ clearly differentiated from those produced by *O. volvulus*. The latter species occurs at much lower altitudes, is found generally on the trunk and extremities and only rarely in the head region, and although the tumors are adherent to the bone, no osseous resorption takes place.

The nodular tumors produced by *O. cæcutiens* are very small, measuring generally from 6 to 20 millimeters in diameter, although Strong states that in Guatemala he has observed tumors 2 to 3 centimeters in diameter, and in one case an extirpated tumor measured 5 centimeters in its greatest length. The fibrous tumors when removed are found to contain male and female adults (the former predominating) as well as numerous microfilariae. The males, being much the smaller, measure from 2.5 to 3 centimeters, and the females from 30 to 44 centimeters in length (Strong).

The microfilariae of *O. cæcutiens* (Fig. 3) do not occur normally in the blood, but are restricted solely to the lymphatics. They have the ability to escape through the capsule of the nodule and to wander through the lymphatics of the subepidermal tissue to remote parts. They are easily detected in thin sections of skin removed from infected persons and are actively motile when observed in normal saline solution. Strong has noted that, while the microfilariae have been found in the skin in all regions of the body, they are most numerous in the areas of the head and neck. The bite of an *Eusimulium* fly (Fig. 2), the insect vector incriminated in onchocercosis, has a tendency to cause a mobilization of the microfilariae from the subepidermal lymphatics in the areas of the skin adjacent to the bite. A section of skin removed from such an area previous to a bite of the fly will show perhaps one or two of the larval forms, but immediately following the bite a second contiguous section will harbor a decided increase in the number of microfilariae.

Blacklock has shown that *Eusimulium damnosum* is the insect vector of *O. volvulus* and has described the various stages of development of the larval worm within the body of the fly. In Africa, *Eu. damnosum* has been the only fly shown to be implicated in the transmission of onchocercid

microfilariae, but in Guatemala and Mexico, Strong states that at least three species are vectors, tentatively identified as *Eu. avidum*, *Eu. ochraceum*, and *Eu. mooseri*. These flies are of aquatic origin and their breeding places are found widespread in swiftly running streams at high altitudes. Rocks, twigs, grasses, etc., immersed in or continuously sprayed by running water, are the favorite sites chosen by the female on which to deposit her eggs.

Strong has followed the developmental stages of *O. cæcutiens* in *Eusimulium* from the time of the ingestion of the microfilariae to the passage of the infective forms through and emergence from the labium. The development in the fly is somewhat similar to that of *Wuchereria bancrofti*. A fly takes from three to five minutes to engorge itself, following which, after a short time, the microfilariae are found in the gut. From the gut the larval forms pass to other parts of the fly, and in from twenty-four to forty-eight hours following the blood meal, are found particularly abundant in other parts of the abdomen and the thoracic muscles. In the gut the microfilariae exhibit a greater activity than in the skin of the infected person. During the course of development in the thoracic muscles, marked changes are noted: The larvæ become much broader, decided changes in the caudal appendage are seen, and the alimentary tract shows considerable development. A marked decrease in vitality is observed and the movements have changed from a squirming, sudden type of motion to that of a slow, gliding motion.

These broader forms undergo further changes in the thoracic muscles, and when they reach the infective state measure 450 to 1140 microns in length and 16 to 25 microns in width and resume their former active movements. These active filarial forms pass toward the head to the labium of the proboscis, through which they finally pass. Strong found that of 1,658 simuliid flies caught at random, about 5 per cent were infected.

Hoffman has described the morphology of various members of the Simuliidæ occurring in Chiapas. *Simulium avidum*, *S. virgatum*, *S. pseudohæmatopotum*, *Eusimulium ochraceum*, *E. mooseri*, and *Eu. turgidum* have been reported from this region. He has found the infective larval forms in one of the above species only, viz., *Eu. mooseri*. Strong has likewise investigated the simuliid flies at Santa Emilia, in Guatemala, and found that three species of *Eusimulium* were capable of transmitting the microfilariae of *O. cæcutiens*. Two other species of this same genus were not incriminated.

EPIDEMIOLOGIC IMPORTANCE

From an epidemiologic standpoint, it is of interest to consider the probable northward spread of onchocercosis along the path concomitant with the occurrence of the insect vector. It is supposed that the infection was introduced into eastern Guatemala by natives from Africa. The course of infection proceeded westerly to the mountainous regions along the Pacific, then northerly into the Mexican States of Chiapas, Oaxaca, and Guerrero. The simuliid fauna of northern Mexico is



Fig. 2.*—A simuliid fly, the insect vector of *Onchocerca cæcutiens*, found widespread throughout the infected areas of Guatemala and Mexico.

This difference in anatomical location may explain why two almost identical organisms produce different clinical pictures. Other filariæ have been found in the eye, but these are regarded as medical curiosities.

DIAGNOSIS

The diagnosis of *Onchocerca cæcutiens* in an infected locality is comparatively simple. The nodules with the presence or history of skin and eye complications produce an easily recognizable clinical picture. These nodules may be easily removed and on sectioning will always show the adult macroscopic worm. In itself, the skin condition could easily be confused with our erysipelas, the differential points being the peculiar greenish discoloration and the fact that skin sections will always show free microfilariae. The eye complications are so varied that they may closely resemble many conditions present in the temperate zone. There remains the fact that long after the acute stage has passed and little evidence of irritation is present, the pupils may have been so affected that they do not react to light or distance. Taken alone, this finding may indicate syphilis, but the presence of nodules and a history of erysipeloid attacks would lead to a suggestion of the etiology.

TREATMENT

The treatment is simple. There is no known drug that will kill the wandering microfilariae. The encysted adults are also safe from the action of any known filariacide. Consequently there remains only the removal of the source of infection, that is, surgical removal of the nodules. Very frequently this procedure is followed by a remarkable clearing of symptoms. This is true especially in the acute cases, where the relief occurs over night. But even when the disease has become chronic, this surgical procedure is of benefit. The case should not be dismissed but observed from

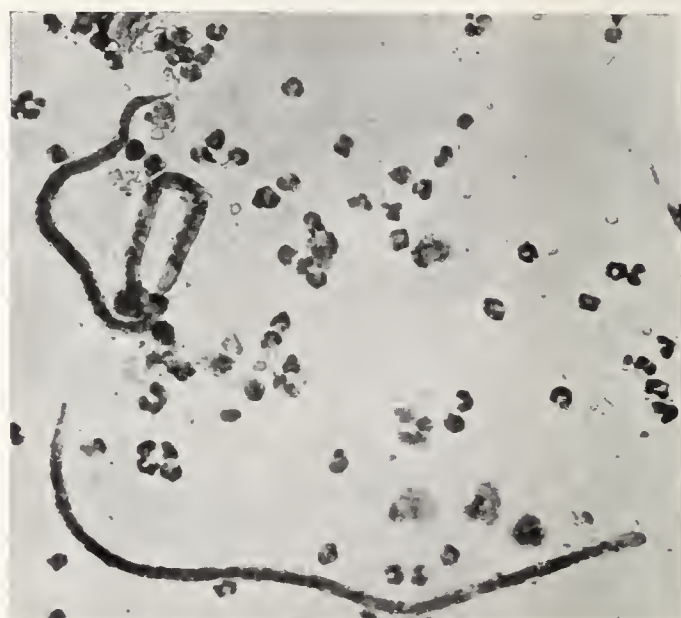


Fig. 3.—Lymph smear showing the microfilariae of *Onchocerca cæcutiens* X320.

time to time to watch for the development of nodules which may have been too small to detect at the time of the previous examinations. Frequently a residual blindness may remain, which, however, can often be helped by iridectomy.

PREVENTION

The problem of prevention is difficult. The Eusimulium fly is very active and lives in heavily wooded terrain by the side of swiftly flowing streams, and especially at the base of waterfalls. These facts present practical obstacles which are difficult or impossible to surmount.

Other measures, such as screening homes, placing mosquito netting about beds, and perhaps even wearing a daytime netting hung from the headwear are of some value. Strong has suggested the systematic removal of the worm-containing nodules and if accomplished this would render the fly noninfectious in time. However, observations over a continued period would be necessary, because minute missed nodules would continue to supply a source of infection.

IN CONCLUSION

This disease may seem a medical curiosity to physicians of the temperate zone since it has no immediate attendant public health problems, but we should become acquainted with it for the following reasons: (1) Clinical manifestations of Onchocercosis resemble many conditions of the temperate zone. (2) The Eusimulium fly is widespread in certain localities throughout the western states. (3) The disease has shown a definite tendency toward a northern migration. (4) The numerous Mexican immigrants in the United States provide an opportunity for the presence of a carrier of *Onchocerca cæcutiens*. This may lead subsequently to the contamination of our own simuliid species. If this occurs, a case of the disease is sure to make its appearance sooner or later; and, once present, it is difficult to eradicate.

Hooper Foundation, University of California.

* Figure 2, through the courtesy of Dr. Gaston Melo, Jefe del Departamento de Salubridad Publica, Mexico.

DISCUSSION

JOHN F. KESSEL, Ph. D. (University of Southern California, Los Angeles).—Though onchocercosis has been known for some sixteen years in Central America, only an occasional critical report has occurred in American journals and there are probably few physicians in California, even in the specialized field of ophthalmology, who are familiar with the condition and who would be prepared to recognize a case if the same were presented. This report should serve a two-fold purpose: (1) to acquaint the profession throughout the state of California with the major characteristics of onchocercosis; and (2) to sound a warning so that our state will be on the alert to recognize the dangers of a possible advance of the disease into this region.

The fact that the filaria involved in the Mexican form of the disease is adapted for transmission to several species of Simuliidæ and that these species, in turn, are different from the insect vectors of *Onchocerca* in Africa, would indicate that the Simuliidæ or Buffalo gnats found in California or other parts of the United States of America might also serve as transmitting agents.

This is an excellent report on a timely subject.



RAWSON J. PICKARD, M. D. (805 Watts Building, San Diego).—It is the large proportion of parasitic diseases that makes tropical medicine so interesting a field. The diagnosis can be a certain one, often the cure is as certain, and the mode of transmission of parasitic infestations, as well as the story of their discovery, is always interesting, sometimes exciting. The paper on Onchocercosis by Doctors Johnstone and Larsen fulfils these pleasant requirements.

There is also much of the unknown awaiting the patience and time of investigators in tropical medicine. Coutelan, studying the central internal body of microfilaria, found it to be a protein inclusion, an alimentary reserve, a sort of vitelline body, and reminds us that microfilaria are "in a manner hatching eggs (œufs embryonnés) in which the larval forms lacking a digestive tube are still in their first stage of development." In that Coutelan's work is based on the common and well-known microchemical staining reactions, it emphasizes the value of using the simple means of investigation at hand everywhere.

Concerning onchocercosis, Brumpt says the diagnosis of filarial itch is more easily made by allowing the vector fly to bite the affected area and then examine the gut content for microfilaria than by biopsy. Strong successfully used this method in Guatemala. The present paper should stimulate search in this state for the possibility of the existence of filarial mange in animals, which exists in Australia in cattle.

PANAMERICAN MEDICAL ASSOCIATION*

A REPORT ON FOURTH CONGRESS

By CHARLES P. MATHÉ, M. D.
San Francisco

THE fourth congress of the Panamerican Medical Association, held in Dallas, Texas, March 21-25, 1933, was a decided success. It was the first meeting of the association in an English-speaking nation, the other congresses having been held in Havana, Cuba, Panama and Mexico City.

THE DALLAS MEETING

Its successful outcome was due to the untiring work and guiding spirit of its officers, consisting

of Doctors Francisco Fernández (Cuba), president; Conrad Behrens (U. S. A.), treasurer; J. E. López Silvero (Cuba), secretary; Miguel Branly (Cuba), Roberto Gutierrez (U. S. A.), Francisco de P. Miranda (Mexico), and Joseph J. Eller (U. S. A.), assistant secretaries; and the seventeen vice-presidents and the twenty-four trustees selected from the twenty-two countries making up the Western Hemisphere.

The congress was originally scheduled to take place in New Orleans, and the untimely death of Dr. Aristides Agramonte of yellow fever fame, permitted Dr. John Oliver McReynolds, past president of the Texas State Medical Association, to swing the meeting to Dallas, Texas. To him and to the Dallas sponsors and committees great credit is due for the success of the congress. Doctor McReynolds' unfaltering courage, particularly during the trying period of financial uncertainty, with all the banks of the United States and Cuba closed just two weeks before the scheduled opening of the congress, is responsible for the culmination of the most successful meeting ever held by the association. During these times of greatest depression he informed all interested in the congress by letter, radio, and wire that it would take place and that checks presented by men coming from all parts of the Western Hemisphere would be honored. In addition, the annual meeting of the Southern Clinical Society, which was to have taken place immediately after this congress, was canceled in order to afford an opportunity for the medical men of the south to attend the congress of the association. In all, about 1500 medical men from the United States and our Latin-American sister republics attended. The official languages of the association are Spanish, French, Portuguese, and English. Most of the papers were given in English, as many of our Latin-American brothers speak our language. Others gave their addresses in the beautiful Castilian language and in French.

ADDRESSES

The inaugural session took place in the spacious McFarlan Auditorium of the Southern Methodist University. A telegram of welcome from President Franklin D. Roosevelt and from the legislative bodies of the national government was read by Doctor McReynolds. Speeches were made by Doctors Francisco Fernández and López Silvero of Cuba, Francisco de P. Miranda of Mexico, Dean Lewis, Charles Mayo, Lewellys F. Barker of the United States, and many others, setting forward the purposes of the association, which are the advancement of the science and art of our noble profession, the stimulation of the spirit of broad fellowship and good will, and the social and intellectual development of the medical men of the new world. The speakers pointed out that the congress hoped to blend the best practical thoughts and progressive ideals of the century with the cultural influences of international contacts, reinforced with a world-wide knowledge of the achievements and needs of the human race.

* Report submitted by Charles P. Mathé, M. D., San Francisco.

SCIENTIFIC SECTIONS

The scientific program included leading men of the Western Hemisphere. In surgery Dr. Charles H. Mayo entertained the audience on subjects chosen from his wide experience in this field. Another surgeon, Dr. William D. Haggard, rightly earned the reputation of being a silver-tongued orator and a raconteur of unusual ability. The anecdotes which he related in the pure African language in connection with his position as toastmaster of the formal banquet, will be remembered by all who had the good fortune of hearing him. Dean Lewis of Baltimore, Doctors H. R. Hartman of Rochester, Ulises Valdes of Mexico, Ernesto R. de Aragon of Havana, and Augusto S. Boyd of Panama, all aided in making the surgical program a success.

Dr. Fred H. Albee of New York was president of the Section on Orthopedic Surgery. This great orthopedist was president of the first congress held in Havana, Cuba, and has been an indefatigable worker in forwarding the interests of the association. Some time ago he conducted a "flying clinic," stopping in the medical centers of Central and South America, promulgating the standards of the association and forming new chapters. Dr. Alberto Inclán, president of the Spanish-speaking orthopedic section, entertained the audience with his interesting papers and formed many friends by reason of his charming personality.

In ophthalmology Doctors Rafael Silva, Th. B. Holloway, and Conrad Behrens were responsible for a most successful sectional meeting. To Dr. Conrad Behrens great credit is due for his untiring work as treasurer and in connection with the extension of the association in America. In otorhinolaryngology Dr. Chevalier Jackson and son, pioneers in the field of bronchoscopy, headed the list of numerous speakers in the section of this fast-progressive branch of medicine. Limitation of space will not permit me to enumerate the participants and officers of the various sections. However, I cannot help to mention Doctors Hugh Young of Baltimore, Joseph McCarthy of New York, Julius J. Valentine of New York, H. W. E. Walther of New Orleans, Granville Crabtree of Boston, and Roberto Gutierrez of New York, in urology; Lewellys F. Barker of Baltimore, Charles Best of Toronto, Elliott P. Joslin of Boston, Fernandez Ocaranza of Mexico, and Aloysio de Casto of Rio de Janeiro, in general medicine; Surgeon General Hugh S. Cumming, Major General Robert U. Patterson, Rear Admiral Charles E. Riggs, Bolivar J. Lloyd of Washington, D. C., in the International Medical Relations Section; F. P. Gengenbach of Denver, Laurence Richard de Buys of New Orleans, Angel A. Aballi of Cuba, and Antonio Sorod Norioga of Mexico, in pediatrics; Joseph Jordan Eller of New York City, Paul O'Leary of Rochester, Vicentes Pardo Castello of Cuba, and Joan J. Mestre of Cuba, in dermatology and syphilology; Charles Craig of New Orleans, George Shattuck of Boston, Rigney d'Aunoy of

New Orleans, and W. Hoffman of Cuba, in tropical medicine and pathology; Conrad Behrens of New York, James C. Braswell of Oklahoma, and Martiniano Mirelles of Mexico, in aviation medicine. Of this group Dr. Julius Valentine, president of the second congress, Dr. Roberto Gutierrez, and Dr. Bolivar J. Lloyd have been particularly active in placing the association on a firm basis. Their numerous international contacts and their thorough knowledge of Spanish have been of inestimable aid to us here in the United States.

From San Francisco, Doctors Hans Lissner, Ernest Falconer, and Edgar Gilcreest spoke in the capacity of invited guests. Dr. Louis F. X. Wilhelm of Los Angeles went as an officer of the Dermatology Section and alternate delegate of the California Medical Association. Dr. Charles Pierre Mathé of San Francisco went in the official capacity of delegate of the California Medical Association and vice-president of the Urology Section, and participated in the scientific session of the Urology and General Surgery Sections.

NEXT CONGRESS IN 1935

It was decided that the next congress should take place in Bogota, Colombia or Caracas, Venezuela, in the spring of 1935. This is to be a "floating congress." A luxurious ocean liner is to be chartered, of sufficient size to accommodate the members, wives and families, and it will start from New York, touching at Miami, Florida, Havana, and the ports of consequence in South and Central America, finally terminating in either Colombia or Venezuela, the next country in which the congress is to be held. The idea of a floating congress gained great popularity, as it will give the members and their families an opportunity of visiting the various Latin-American countries.

OFFICERS

The newly elected officers of the association are: John Oliver McReynolds, president; Joseph Eller, English-speaking secretary; J. E. Lopez Silvero, Spanish-speaking secretary; Conrad Behrens, treasurer; and seventeen vice-presidents selected from the twenty-two nations of the Western Hemisphere, among which Charles Pierre Mathé of San Francisco was chosen.

CALIFORNIA BRANCHES

The ideals of the association, among which are the promotion of more intimate and friendly relations and mutual understanding among physicians and surgeons of the Western Hemisphere, are conceded by all our progressive medical men. It is the purpose of its present officers to include the medical centers in Brazil and Argentina and to form chapters in the principal cities of the United States and Canada. Membership is open to the members of the California Medical Association. The San Francisco chapter, formed some two years ago, is flourishing, and chapters are in the process of formation in Los Angeles and Seattle.

450 Sutter Street.

THE LURE OF MEDICAL HISTORY*

HIERONYMUS FABRICIUS AB
AQUAPENDENTE*

By S. L. MILLARD ROSENBERG, Ph. D.
University of California at Los Angeles

III

WE have considered the first two of the five works by Fabricius, contained in the volume we are examining,† and now come to the third—a document, like *De Formato Fœtu*, of the highest value in the history of embryology. And here, reverting again to Harvey, we may say that in his treatise *On Generation* Harvey leaned heavily on this work of Fabricius. It is entitled *De Formatione Ovi et Pulli*, and is illustrated with seven magnificent full-page copper plates. Dr. Grindon says:

*A Twenty-five Years Ago column, made up of excerpts from the official journal of the California Medical Association of twenty-five years ago, is printed in each issue of California and Western Medicine. The column is one of the regular features of the Miscellany Department of California and Western Medicine, and its page number will be found on the front cover index.

†Part I of this article was printed in the March issue and Part II in the April number of CALIFORNIA AND WESTERN MEDICINE.

‡For welcome aid and helpful suggestions with some of the difficulties encountered in the translations from the original Latin texts, for the purpose of the present study, it is a pleasure to express thanks to my friends, Professor L. H. Loenholm, formerly of the University of Tokio, and to Professor Herbert B. Hoffleit of the University of California at Los Angeles.

† See footnote to Part I in March issue of CALIFORNIA AND WESTERN MEDICINE.

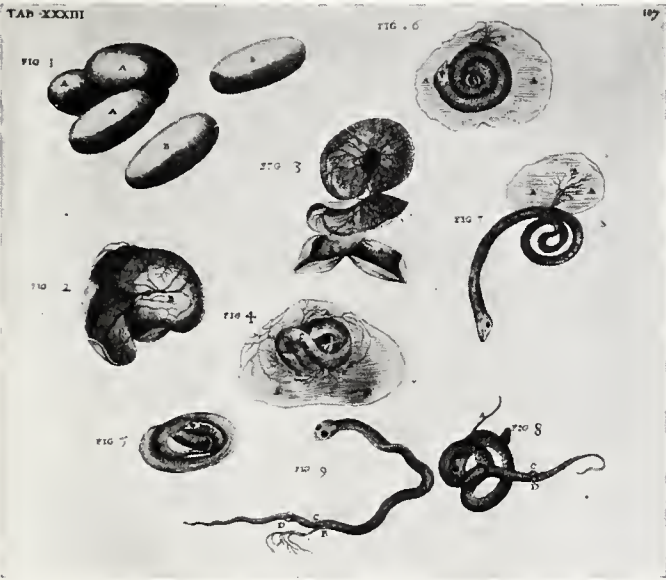


Fig. 8.—Figures 1-9, Plate xxxiii, of *De Formato Fœtu*. Figure 1 shows five eggs of the snake. A, A, A, three eggs united by the tunic only. B, B, two eggs separated from the membrane. Figure 2, the prior tunic separated from the other one lying below. A, the first tunic of the egg, full of veins. B, the other tunic, lying below. C, the trunk of the vein running through it. Figure 3 shows A, A, A, the internal part of the prior tunic. B, the second opposite part of the tunic. C, a small part similar to a cone where the tunic is missing. Figure 4 shows the first tunic removed from above, and the two tunics lying below, one very thick, the other thin and lying close by the fetus; also the position of the fetus. A, A, A, the second tunic. B, the third tunic, touching the fetus. C, fetus. Figure 5 shows the position of the fetus extricated from one exterior spiral, the better to visualize the position of the upper fetus. Figure 6, a variation in the position of the other fetus. A, A, the thick membrane or chorion. B, the umbilical vessels. Figure 7, the same fetus drawn out, the head hanging down so as to show better the umbilical vessels. A, A, chorion. B, umbilical vessels. Figure 8, the snake rolled together. A, the umbilical vessels. B, the place of their insertion. C, the interstice between the testicles and the navel. D, the testicles.

HIERONYMI FABRICI
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A N A T O M I C I
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P A T A V I I,
Ex Typographia Laurentij Pasquadi.
M. D. C. I. I. I.

Fig. 9.—Frontispiece of *De Venarum Ostiolis*. Translation:

Hieronymus Fabricius of Aquapendente, Anatomist,
of Padua,
on
The Valves of the Veins
Padua
From the press of Laurentius Pasquatus
1603

Note: On the dedicatory page it says that "Hieronymus Fabricius dedicates this book to the glorious German Nation."

"More than ten generations of physicians have unceasingly labored since this work was written, and yet, all things considered, it is wonderfully full and correct. A quaint passage describes the method by which the chick finally issues from the egg: 'The chick needing air, by its chirping notifies its mother that it is time to break the shell, its own beak being too soft for the purpose. There is, however, sufficient space and air to permit the chick to chirp loud enough to be heard, as both Pliny and Aristotle bear witness. The chirping may have a pleading sound (forteque quidpiam petentis significatrix) and the hen, hearing it and understanding the need, or, if you please, eager to behold her chick and most dear child (pulli dilectique filii conspiciendo desiderio), pecks open the shell.' The error of this description was pointed out some years later by Harvey, who correctly insisted that the chick makes its escape without the aid of the hen."

The fourth study in our book is a treatise *De Loquela Brutorum*, which contains, says Doctor Grindon, some queer statements: "Our author

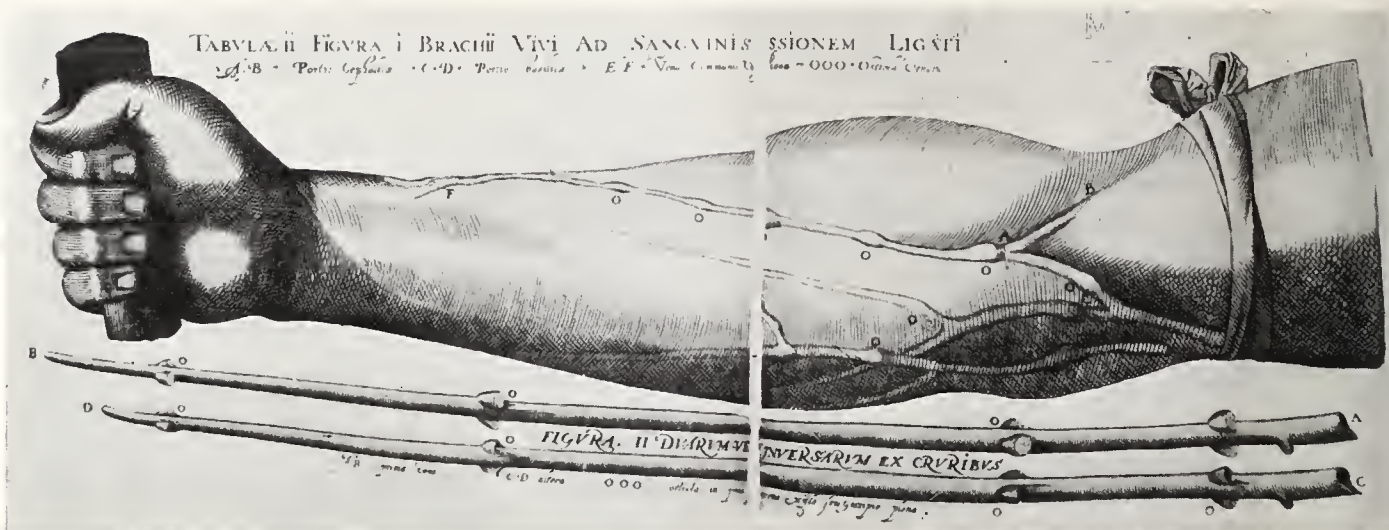


Fig. 10.—Figures i and ii, Plate ii, of *De Venarum Ostiolis*. Figure i shows a living arm, the upper arm compressed by a bandage, as in blood-letting, A-B, portion of the cephalic or humeral vein. C-D, portion of the basilic or jecorary vein. E-F, "vena communis" or vena mediana, in which, as in other veins, the valves, O, O, O, appear like nodes; these valves can be seen outside in the living arm. Figure ii shows two inverted veins of the legs; how the valves, O, O, O, stand inside the cavity of the veins is clearly shown. But from an inspection of those inverted veins, the singular fact appears that the first, or upper, valves are placed at an angle to the next following, like the branches in plants. Also note that in the upper vein, A-B, the valves are filled with xylon or gossipion, in order to show them better; but in vein C-D the valves are empty.

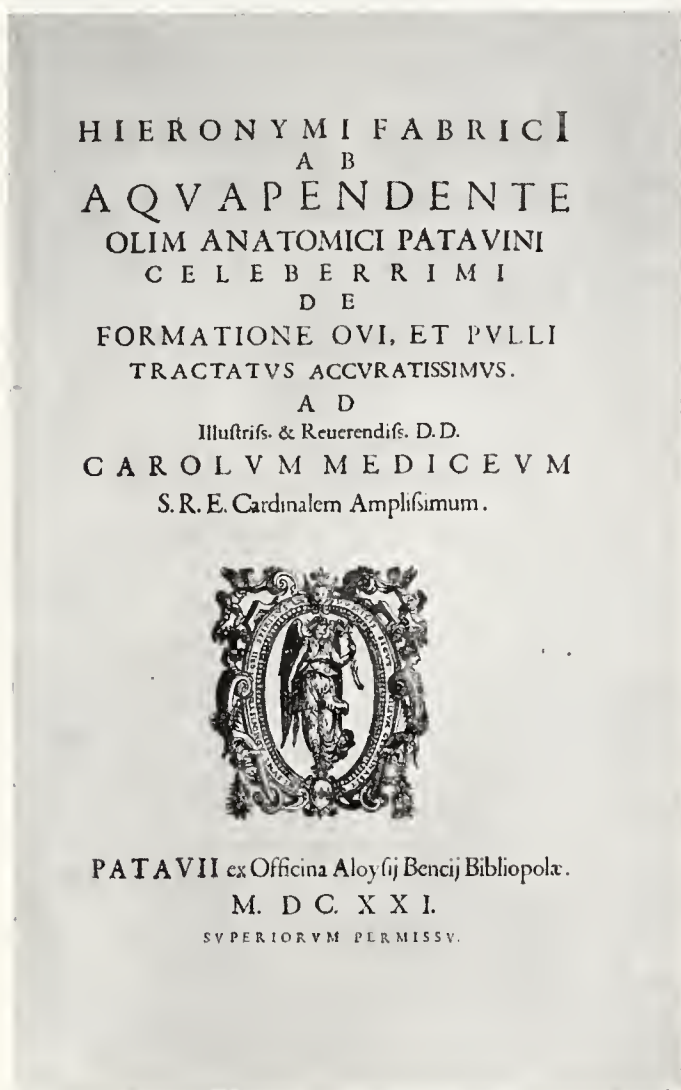


Fig. 11.—Frontispiece of *De Formatione Ovi et Pulli*. Translation:

Hieronynus Fabricius of Aquapendente, the widely celebrated former Anatomist at Padua, on *The Formation of the Egg and the Chick*, a highly accurate treatise. Dedicated to the Most Illustrious and Reverend Doctor of Divinity, His Eminence the Most Noble Cardinal Carolus Mediceus. Padua. Press of Aloysius Bencius, Bookseller. 1621. With permission of the Superiors.

Note: This treatise, in three chapters, profusely illustrated, shows the daily development of the chick, and observations from the fourteenth to the twenty-fourth day, i. e., to the time of hatching. The first chapter deals with the history of the uterus in birds; chapter two, of their function in the generation of the eggs; the third further discusses their function.

contends that every animal species has its own language, and he records instances of persons who could understand them. In support of his belief that men may learn to understand the speech of animals, he argues: 'If brutes that are scarcely capable of instruction understand when men speak to them, it should be far easier for man to understand brutes.'

The final treatise in our book, though closely related to the preceding one, is not mentioned by Doctor Grindon. It is *De Locutione et eius instrumentis*; that is, *The Mechanics of Speech*. There is one full-page plate showing the organs of speech, except that the larynx is not laid open. The elements of articulation and production of voice, their places of production and mechanics, the mechanical reasons for mispronunciation, peculiarities of speech in various lands, and the multitude of citations and illustrative anecdotes make this treatise as interesting to phonologists as to medical men. Fabricius always wrote colloquially when the subject permitted, constantly revealing his neighborly attitude. Quotable passages abound; here is one:

"The Emperor Charles V. I have heard tell, used to say that German is the language for soldiers; Spanish, for lovers; Italian is suited to oratory; and French to the converse of nobles. But Alius, who was a German, referring to what Charles had said, remarked that Spanish is best in prayer to God, because it is grave and majestic; Italian is of an intimate nature and suited to friendly conversation; French is the most effective in persuasion, since it is the softest speech; but if threats are needed and a harsh mode of address, speak in German, as it is the roughest, most vehement and menacing."

It is noteworthy that English is ignored by both Charles and Alius.

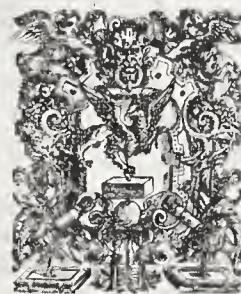
"There are several works of Fabricius," says Professor Singer, "which illustrate the first stirring of the new physiological movement. Such treatises as that *On Respiration and its instruments* exhibit the complete helplessness of physio-



Fig. 12.—Reproduction of page 63 of *De Formatione Ovi et Pulli* and translation of the accompanying explanation of the figures. Figure 2 is of the egg as it appears on the second day after incubation. A, obtuse part, in which nothing has been formed as yet, excepting that the albumen has taken on greater concretion. Figure 3, third day; B, the membrane called chorion. C, umbilical vessels running through the chorion. D, larger branches. E, yolk. Figure 4, fourth day. F, body of chick, like a very small flea. G, chorion. H, several small branches of the vessels issuing from the chick. I, an extracted fetus, showing head and spine. K, fetus leaning toward middle of egg. Figure 5, fifth day. L, the large membrane and the fetus. M, an extracted fetus with head and spine. N, umbilical vessels inclining down from the fetus. Figure 6, sixth day. O, larger fetus, conglobated. P, the larger umbilical vessels. Q, first fetus extracted, wrapped in membrane. R, second fetus conglobated. S, third fetus extracted. T, head larger than the rest. U, large prominent eyes. Figure 7, seventh day. A, yolk, diminished more than in the preceding. B, extracted fetus, of same size as in Figure 6. C, bladder projecting from head and taken to be the brain. Figure 8, eighth day. D, larger fetus, body apparently formed. E, E, vein and artery entering the navel. F, extracted fetus. G, incipient wings. H, legs. I, umbilical vessels entering navel. K, large head. Figure 9, ninth day. L, larger fetus and larger vessels. M, extracted fetus. N, eyes apparently quite formed. O, beak, formed. P, vessels with membrane inserted in navel. Figure 10, tenth day. Q, fetus, in middle of egg. R, extracted fetus. S, bladder enveloping head, like kidneys. T, head quite formed and clear. U, chorion, with fetus in water. Figure 11, eleventh day. A, still larger fetus. B, eyes of extracted fetus, the largest feature. Figure 12, twelfth day. C, fetus conglobated in egg. D, larger and fuller vessels. E, right foot of extracted fetus, toes distinct. Also E, vessels with membrane appended to navel. Figure 13, thirteenth day. F, larger fetus. H, first fetus extracted with yolk, albumen, and vessels. I, vessels extended through yolk and albumen. M, membrane surrounding yolk. N, third membrane enveloping fetus. O, third perfect fetus, feathers appearing.

logical thought in the absence of any real knowledge of the workings of the heart or of the nature of the respiratory exchange. We have here merely an intellectual discontent with current views without any systematic building of new knowledge. Somewhat more hopeful is the outlook when Fabricius attempts to analyze the muscular action

HIERONYMI FABRICI
A B
AQVAPENDENTE
ANATOMICI
PATAVINI
DE
BRVTORVM
LOQVELA.



PATAVII,
Ex Typographia Laurentij Pasquali.
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Fig. 13.—Translation of the frontispiece of *De Brutorum Loquela*:

Hieronymus Fabricius of Aquapendente, Anatomist, of Padua on *The Speech of Animals*. Padua. Press of Laurentius Pasquatus. 1603.

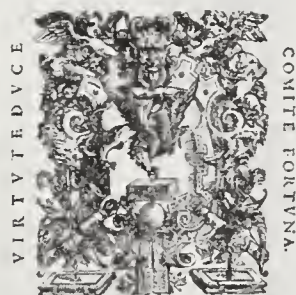
Note: The treatise is in six chapters, dealing with (a) whether animals really speak, and what kind of speech; (b) whether human speech differs greatly from that of other animals; speech between animals; (c) use and purpose of speech between animals; (d) expression, among themselves and toward others, of animals to show mental states; (e) manner in which the speech of animals may probably be understood and learned; (f) the organs of speech in animals, the most important parts thereof, and the manner of articulation.

of the digestive tract. He also wrote a book devoted to vision, in which he gave good figures of the structure of the eye, being the first of moderns to grasp the true form of the crystalline lens."

Of instruments devised or recommended, a few may be noted in a very cursory reading: In operating for pterygium, Fabricius used a leaden ring slipped between the eyelids, taking pains to spare the caruncle; a new instrument for removing nasal polypi is described; when inflammation prevents separating the jaws, the patient may be fed through a curved canula inserted through one of the nares; artificial teeth and instruments for extracting teeth; instruments for removing foreign bodies from the esophagus and the ear; an apparatus for torticollis; use of the catheter—these are only a few of the great number, many of them of his own invention, that might be listed.

For some reason we do not divine, this kindly man had a grudge against his contemporary Eustachius, whom he mentions only to oppose;

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AQVAPENDENTE
PHILOSOPHI AC MEDICI
IN FLORENTISSIMO GYMNASIO
PATAVINO
ANATOMES ET CHIRVRGIÆ
PROFESSORIS PVBLICI SINGVLARIS
ET SVPRÆORDINARIJ
D E
LOCVTIONE
ET EIVS INSTRVMENTIS
LIBER
A IOANNE VRSINO EDITVS M. DC. I.



Patauij, Ex Typographia Laurentij Pasquati.
M. DC. III.

Fig. 14.—Translation of the frontispiece of *De Locutione*:

The Book of Hieronymus Fabricius of Aquapendente, Philosopher and Physician at the most flourishing Gymnasium of Padua, Unique and Extraordinary Public Professor of Anatomy and Surgery, on

Language and Its Instruments.

Published by Johannes Ursinus, 1601.

Padua. Press of Laurentius Pasquatus
1603

Note: This treatise, dedicated to Thomas Zamoyski, son of Johannes, Chancellor of Poland, deals in thirteen chapters with the anatomy of language, as follows: (a) use of language explained, not grammatically, but philosophically; (b) Aristotle's definition; (c) detailed description of articulation; (d) the letters and their kinds; (e) the seven philosophical problems of letters expounded and solved; (f) syllables; (g) the double organ of language, causes of consonants and vowels; (h) places of production of vowels and their effect; (i) functions of the tongue, lips, etc., in articulation; (j) effective and useless motions of the tongue in articulation; (k) the various formations and pronunciations of the letters; (l) the number of letters and the varieties of dialects; (m) the natural letters [i. e., as pronounced; the written letters Fabricius calls "artificial"].

for instance, he credits Aristotle with the discovery of the eustachian tube, and ignores the discovery by Eustachius of the external ligament of the malleus.

He failed to see the use of the cochlea, discovered by Fallopius, and calls it a mass of formless cavities of which no exact description can be given. There are but few of such lapses, however; the marvel is that Fabricius saw so much and exhibited such originality. And it is greatly to his credit that, though so daring and resourceful a surgeon, he constantly advises against resort to the knife except when all medical means have failed, and gentle surgical measures are frequently substituted for the more severe ones in use. "Sati-

est sine spe patientes mori quam occidi,"¹ he says; and I may terminate this sketch with a rule he reiterates which might be, even today, more closely followed: "Chirurgia omnino dimittenda est quando medicamentum sanare potest."²

4508 Willowbrook Avenue.

¹ "It is better for patients to die without hope than to be slaughtered."

² "By all means dispense with surgery when a cure can be effected by medicine."

CLINICAL NOTES AND CASE REPORTS

RELAPSING FEVER: A NEW ETIOLOGICAL OBSERVATION*

WITH CASE REPORT OF A FIELD WORKER

By ROBERT T. LEGGE, M. D.
Berkeley

THE introductory comments to the case report which follows are printed in this issue in the Editorial Comment department. (See page 380.)

REPORT OF CASE

C. W., age 29, single. A young medical entomologist, a graduate student at the University of California, was employed by the California State Board of Health, on account of the reporting of a few cases of relapsing fever in California, to make a field survey of certain ticks found on rodents in this state to determine whether these vectors were carriers of spirochetes. The place of operation was in Sierra County. A species of tick of the genus *Ixode*, a larval variety, light gray in color, about half the size of a pin-head, was found on chipmunks and tamarack squirrels. Many of these animals were shot, and in some of the specimens spirochetes were found on microscopical examinations of the blood smears.

Eight days before the onset of the prodromal symptoms, the patient sustained a deep scratch of his right thumb and had a raw area on his hand from a burn, and while handling a freshly killed tamarack squirrel the blood of the animal contaminated his wounds. The blood smear of this animal was positive for spirochetes, and when inoculated in laboratory mice produced spirochetosis. The incubation period and the symptoms were typical. The patient came home as soon as the prodromes appeared. He was seized with a dull mental depression, chill and sweating, severe frontal headache, pains in his back, thighs and forearms. Face flushed and hot. Temperature, 101 degrees Fahrenheit. Vomited several times. Complained of a cough and being very ill.

Physical Examination.—Eyes suffused, tongue coated, chest negative. Abdomen, no macular spots; liver and spleen, slight dullness; some sensitiveness on palpation. Urine: Specific gravity, 1.030; trace of albumen; sugar, negative; few granular casts. Blood count: White blood cells, 12,800; polymorphonuclears, 89 per cent; malarial organisms, negative. Agglutination tests: Typhoid, undulant fever, and tularemia, negative. Spirochetes found in smear.

A white mouse inoculated with the patient's blood died from the disease with positive blood findings (*Spirochata recurrentis*).

Diagnosis.—On account of cough, fever and aching, influenza might be suspected. Typhoid was considered. The history of contact and the spirochetes found

* From the department of hygiene, University of California.

* Read before the Alta Bates Hospital staff meeting, September 12, 1932.

in the blood during the febrile state, which rose to 104 degrees Fahrenheit on the third day of the attack, clinched the diagnosis of relapsing fever.

Treatment.—During the period when the temperature was at its highest one intravenous injection of .03 neoarsphenamin was introduced. On the following morning, temperature was normal, tongue clean, blood examination negative, and mice inoculated with patient's blood showed no symptoms. With the exception of some aching in the back for a few days, the patient remained afebrile without another relapse. For a period of a fortnight he was kept under observation. The cure was certainly magical.

COMMENT

The reporting of the history of this case should be of scientific interest to both public health authorities and clinicians, as it offers an explanation as to how relapsing fever may be endemic in California; and conclusively proves that certain field rodents are victims of spirochetosis, which may be conveyed to man.

The question as to whether the vector is a species of tick of the genus *Ornithodoros* must be eventually decided by the findings of research investigation.

University of California.

MARKED HYPERGLYCEMIA IN DIABETIC KETOSIS AND BEGINNING COMA WITH RECOVERY*

By E. F. KEHR, M. D.

AND

R. A. KOCHER, M. D.

Carmel

FOSTER¹ reports 1,260 milligrams of blood sugar in a case of diabetic coma; Curtis and Dixon,² 1,690 milligrams; Shepardson and Anderson,³ 1,090 milligrams; Gray and Sansum⁴ report a fourth case, which showed 900 milligrams of blood sugar by the Shaffer method and 1,000 milligrams by the Folin-Malmros method. We wish to add another case of marked hyperglycemia in beginning diabetic coma, rapid recovery from acetonuria and glycosuria, with sudden death from cardiac failure after discharge from the hospital.

REPORT OF CASE

A woman, age seventy-three, was referred to us on August 6, 1932, in a comatose state from which she could barely be aroused. Her physician, who accompanied her, stated that four days previously she became very drowsy and weak, could not be up and about, and retrogressed rapidly to her state on admission. Her husband stated that she did not seek medical advice although she had known of her diabetes for eight years, but dieted to the extent of eliminating sugars and sweet foods. She had eaten little food since her sudden attack four days previously.

On admission she was extremely drowsy, but the most striking feature was the marked acetone odor which permeated the room. She could be slightly aroused but would immediately return to her comatose state. Her temperature on admission was 97; pulse 124, very irregular and weak; respiration 22, without Kussmaul breathing. Blood pressure was 110/68. The eyeballs were moderately soft and jelly-like, the pupils being equal and regular and reacting to light. The heart sounds were weak and distant and irregular. No

cardiac murmurs were heard. There were crepitant râles in the bases of the lungs. The abdomen was negative to palpation, the liver edge being felt at the costal margin. The extremities were cold and clammy and the ankles were swollen and pitted slightly on pressure.

The urine on admission revealed four plus sugar (Benedict's); acetone, four plus; diacetic acid four plus; albumen negative. The blood sugar (Pickard-Pierce) was 1028 milligrams per 100 cubic centimeters. Blood cholesterol and CO₂ combining power were not estimated in this emergency. It was apparent that there was a cardiac complication to the diabetic ketosis.

She was immediately given 100 units of insulin and was sufficiently aroused to sip a glass of sweetened orange juice. Since this was possible no intravenous glucose was administered. Every hour the urine was examined and insulin was administered hypodermically in dosages based upon the amount of urinary sugar present. On this basis, she was given 50 units of insulin and a glass of orange juice at 3, 4, and 5 p. m., the urine showing four plus sugar and four plus acetone. At 7 p. m. her urine showed two plus sugar and one plus acetone. She was much brighter and her pulse began picking up in volume and regularity. She was given 50 units of insulin at this time and the 8 o'clock administration withheld, since we were amazed at the rapid action of the insulin, especially with so high an initial blood sugar, and we did not want to embarrass the myocardium by dropping the blood sugar too low. At 9 p. m., seven hours after admission, her urine showed one plus sugar and a trace of acetone. The blood sugar was taken one-half hour later and found to be 108 milligrams per 100 cubic centimeters (Pickard-Pierce). The blood sugar determinations were carefully checked because both were so startling. No further insulin therapy was given. The patient could now be easily roused but preferred to lie quietly and sleep. The urine remained sugar and acetone free until the day following admission at 10 p. m. During the night she frequently sat up in bed complaining of shortness of breath, although her pulse was stronger than on admission and fairly regular. She was given fluid food the day following admission, soft foods the third day, and on the fourth received a soft diet of 1,200 calories, 50 grams protein, 77 grams carbohydrate and 77 grams fat, with 20 units of insulin before breakfast and 10 units before the evening meal. We permitted the urine to show sugar on the third day as long as acetone bodies were not present. She was thereafter given increasing amounts of solid foods on the same diet order as above. She remained acetone free throughout the month of her stay in the hospital and occasionally showed a trace to one plus sugar. We gave no more insulin than a total of 30 units a day. During her third week she was placed on a 1,500 calorie semisolid diet, 60 grams protein, one part carbohydrate to one part fat, with 30 units of insulin a day.

Active digitalization was begun on the day following admission, and while there was improvement in her pulse and heart sounds, dyspnea persisted. Her fluid output slightly but consistently lagged behind her fluid intake despite diuretics, with the consequence that her legs slowly and progressively accumulated fluid until there was moderate pitting edema.

At the end of a month, during which time she had absolute bed rest, her family took her home by ambulance. We felt that her diabetes was satisfactorily and practically controlled, with a trace to one plus sugar in the urine, but the cardiac condition required prolonged bed rest, which the family insisted could be carried out at home. Her diet and insulin dosage remained unchanged. She died shortly after, due to cardiac collapse. Necropsy was not obtained.

COMMENT

The necessity of maintaining a slightly higher than normal blood sugar level in cardiac patients is well recognized. It is probable that the sudden

* From the Grace Deere Velie Metabolic Clinic, Carmel.

withdrawal of sugar in the blood embarrassed the already damaged myocardium in this patient. Yet, faced with a marked ketosis and impending coma with so high an initial hyperglycemia, active insulin therapy was indicated. We did not anticipate such a marked response to the insulin in this case, a drop in blood sugar from 1,028 to 108 milligrams in seven hours, with a total of 290 units of insulin, especially with glucose administered hourly. The patient was permitted to maintain a blood sugar level higher than the renal threshold after her rapid response to insulin was observed. We are not familiar with the details of the death of this patient after her discharge from our direct care except that cardiac decompensation became acute and marked and death supervened within a short time.

P. O. Box HH.

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FLEXIBLE ETHER MASK

By HARRY S. FIST, M. D.
Los Angeles

THE flexible ether-mask frame here illustrated was devised by the author in an attempt to prevent traumatism of the face during anesthesia.

This frame is made of light-weight coil springs about five-sixteenths of an inch in diameter, one oval piece and two attached cross pieces as sketched, fastened together with thread or wire. The clean gauze covers which fold over the frame may be held with safety-pins or stitched with needle and thread. The result is a practically indestructible ether mask which is safe, flexible and adaptable to the face.

1930 Wilshire Boulevard.

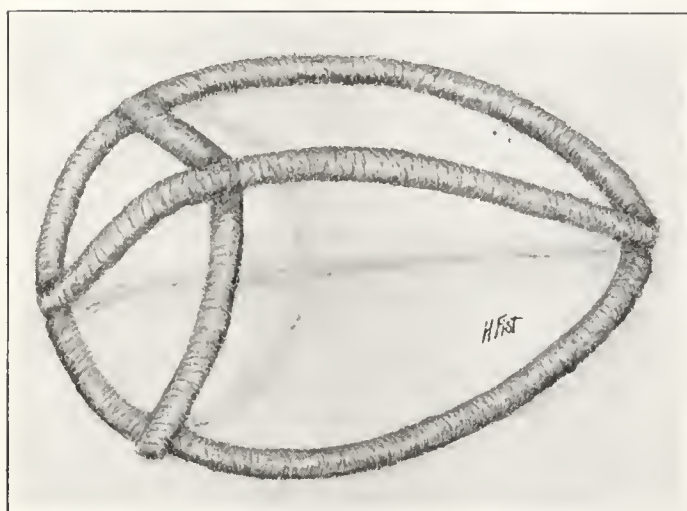


Fig. 1.—Drawing of flexible ether mask.

CORONARY OCCLUSION WITH HYPERLEUKOCYTOSIS*

By DON CARLOS HINES, M. D.
San Francisco

REPORT OF CASE

HISTORY.—Mrs. E. M., age sixty-one, a negro cook, was admitted to Lane Hospital February 23, 1931, with the complaint of "pain over my heart" for three days. The family history was irrelevant. She had always been "strong and rugged."

Several years previously she had begun to notice slight precordial distress when fatigued, and mild palpitation and dyspnea on exertion. In 1930 she began a progressively downhill course but continued her work. A month before entry dyspnea and general weakness forced her to bed, and she called a physician, who prescribed "green drops," evidently digitalis. This did not benefit her, and she noted orthopnea and attacks of nocturnal dyspnea. She remained in bed most, but not all, of the time.

Three days before admission she was awakened at night by an excruciating nonradiating pain in the left upper chest accompanied by extreme dyspnea, nausea, and a sensation of smothering to death. The extreme pain lasted an hour, and a gripping sensation persisted for several days. She vomited many times and had diarrhea. Two days before admission she began to cough up small amounts of blood. There had been a weight loss of thirty pounds in the preceding year.

Condition on Entry.—Physical examination on entry showed a thin, worn, dyspneic, moderately prostrated negress of sixty years. The temperature was 38.2 degrees centigrade rectally, the pulse 82, respirations 30. The blood pressure varied from 150/90 to 110/70. There was moderate general and retinal arteriosclerosis. The neck veins were distended when the patient was sitting up. There was a heaving apex impulse in the fifth intercostal space in the anterior axillary line. Heart sounds were faint and were obscured by an extensive friction rub. The pulse was regular but variable in force. The lung bases were dull, especially the right, with faint breath sounds and showers of crackles. The abdomen was somewhat distended, with resistance and some tenderness in the right upper quadrant. Liver edge and spleen were not felt. There was no edema and no general glandular enlargement. A clinical diagnosis was made of arteriosclerosis with degenerative heart disease and coronary occlusion.

Laboratory tests showed: blood Wassermann negative; hemoglobin 74 per cent Sahli; erythrocytes 4.2 million; leukocytes 140,000 with polymorphonuclear neutrophils 74 per cent, lymphocytes 2 per cent and myelocytes 24 per cent. The erythrocytes varied moderately in size and shape, and many showed a deep polychromasia. Aside from their large number, there was nothing about the leukocytes to suggest leukemia. Almost all of the myelocytes were mature neutrophils. A table of subsequent blood counts is appended.[†]

Urine and stool were normal. Electrocardiogram showed a rate of 75, sinus rhythm, normal intervals, left axis deviation, and inversion of T-waves in lead 1. In a roentgenogram of the chest (taken March 5) the measured cardiac area was 38 per cent above the predicted, and calcification was seen in the arch of the aorta.

Progress.—Her course in the hospital was characterized at first by slow improvement. The temperature continued slightly elevated, often touching 38, and once reaching 38.6 (rectally). The friction rub disappeared, allowing a musical systolic murmur to be heard over the precordium and vessels of neck and arms. There was no sputum.

The pulse began an upward trend on February 28, reaching 100 on March 2, when she noted an increase

* From the department of medicine, Stanford University Medical School.

† I am indebted to Dr. R. C. Mermod for checking some of the differential counts.

TABLE 1.—Blood Counts

Date	R. B. C. Millions	Hgb. %S	W. B. C. Total	Differential in Number of Cells			Platclets
				Polys.	Lymphs.	Myelocytes	
Feb. 23	4.2	74	140,000	103,600	2,800	33,600	.....
Feb. 24	4.1	79	138,000	110,400	1,400	26,200	122,000
Feb. 25	....	....	112,000	70,600	4,500	31,400	.....
Feb. 26	4.0	77	115,000	76,000	4,600	33,300	143,000
Feb. 27	4.0	77	102,000	66,300	6,100	21,400	122,000
Feb. 28	4.3	81	107,000	76,000	5,400	20,300	511,000
Mar. 2	....	82	108,000	76,600	4,300	17,300	.....
Mar. 6	4.7	87	100,000	77,000	8,000	11,000	413,000
Mar. 7	....	....	140,000	95,200	8,400	28,000	.....

Date	Differential in Per Cent							Normoblasts per 100 RBC	Reticulo- cytes
	Polys.	Lymphs.	Myelos.	Basos.	Eos.	Monos.	Smudge		
Feb. 23	74	2	24	0	0	0	0	....	....
Feb. 24	80	1	19	0	0	0	0	6	5.4%
Feb. 25	63	4	28	0.5	0	0.5	4	....	....
Feb. 26	66	4	29	0	1	0	0	many	2.4%
Feb. 27	65	6	21	0	1	1	0	3	3.4%
Feb. 28	71	5	19	1	2	2	0	....	3.8%
Mar. 2	76	4	16	2	2	0	0	....	....
Mar. 6	77	8	11	2	0	2	0	....	3.2%
Mar. 7	68	6	20	3	0	3	0	....	....

in her persistent mild precordial distress. A gallop rhythm was present at times. On March 6 she had two attacks of extremely severe pain with dyspnea and cold sweating. The pulse jumped to 130 and the blood pressure, which had averaged 130-140/90, fell to 110/90. The following day she gradually became cold, the pulse slowed to 60 to 70, the blood pressure fell to zero, and in the course of a few hours she died.

Autopsy Findings.—Necropsy showed a small amount of clear yellow fluid within the pericardium, which was roughened by fibrin. There were easily broken adhesions over the left ventricle near the apex. The heart weighed 445 grams and was twice normal size. The valves and orifices were normal except for moderate calcification in the larger flap of the mitral.

The left ventricle was greatly dilated. The muscle was considerably scarred, soft, and of gray color beneath the pericardial fibrin deposits. It measured 11 millimeters in places but was thin toward the apex with one area only two millimeters in thickness. No recent gross infarction was visible. Microscopically there were moderate sized old scars and many large areas filled with young, highly vascular granulation tissue containing many round cells and plasma cells, the nearby myocardial fibers being swollen, degenerated, and vacuolated, with large pale-staining nuclei. The coronary arterioles were thickened, with fibrosis, hyalinization, and much calcification. The coronary arteries were narrow and calcified, with apparent occlusion of many branches. The base of the aorta and the walls of the sinuses were sclerotic, with heavy calcium deposits. The arch was similarly calcified and the intima wrinkled. The abdominal aorta showed a great degree of arteriosclerotic change and ulceration. Microscopic examination showed in addition moderately heavy perivascular infiltration of round cells and plasma cells about the vasa vasorum.

The lungs were not remarkable except for collapse and a few small areas of moist consolidation.

The spleen measured 12 by 9.5 by 6 centimeters, weighed 300 grams, and had a smooth surface. The cut section was deep purple with firm pulp projecting above the trabeculae. Microscopically there was dilatation and congestion of the venous sinuses with many prominent leukocytes. The fibrous reticulum was slightly thickened, the splenic corpuscles were small, and the walls of the arterioles were thickened, with fibrosis, hyalinization and partial calcification. Moderate numbers of large, granular brown-pigmented mononuclear cells were present.

The liver measured 22 by 18 by 8 centimeters, weighed 1520 grams, and showed moderate cyanotic atrophy. Microscopically there were areas of dilata-

tion and congestion of the lobular sinusoids and central veins. There were numbers of round and plasma cells in the periportal spaces, and brown pigmentation and small fat droplets in the central liver cells. No leukemic infiltrations were seen.

The bone marrow of the ribs appeared normal. Dr. Harry A. Wyckoff examined smears and reported: "Polymorphonuclear leukocytes far exceed the normal number. Many of these approach the adult stage of development. Myelocytes are also numerous, but not in the striking excess shown by the polymorphonuclear cells. Myeloblasts are not so numerous as in normal bone marrow, and not many mitotic figures are found. Normoblasts are increased in number, and erythrocytes are plentiful. Megaloblasts are relatively few. Many of the megalokaryocytes seen show some degree of degenerative change and some are represented only by naked concentrated nuclei."

With the high leukocyte count in mind, Dr. William Ophüls examined the gross specimens and the microscopic sections and was unable to find evidence of leukemia.

The anatomical diagnosis included: arteriosclerosis, general; arteriosclerosis, local, coronaries, with old and recent myocardial lesions; arteriosclerosis, local, aorta; arteriosclerosis, local, renal artery, with scars in kidney; bronchopneumonia; pericarditis, serofibrinous.

COMMENT

Search of the literature discloses relatively few instances of leukocyte counts of more than 100,000 not associated with leukemia. Such cases as have been reported were almost exclusively in the presence of infection, notably in children and perhaps most commonly with pertussis. With coronary occlusion the highest count of which I could find record was 34,500 (Levine, S. A., and Brown, C. L.: Coronary Thrombosis, Medicine, 1929, 8:362, Case 4).

The case here reported is remarkable in: (1) that in such an otherwise typical picture of coronary occlusion there should exist as an isolated and persistent finding such a high leukocyte count; and (2) that with such a high count of twelve days' known duration there should be in the blood and in the blood-forming organs no evidence of leukemia.

Stanford University Medical School.

BEDSIDE MEDICINE FOR BEDSIDE DOCTORS

An Open Forum for brief discussions of the workaday problems of the bedside doctor. Suggestions of subjects for discussions invited.

ABORTION

WILLIAM H. GILBERT, M. D. (746 Francisco Street, Los Angeles).—There is a wide difference of opinion as to the best method of treating abortion. Much of this is due to the fact that misunderstandings arise as to which phase of the condition is under discussion. Very often under the general head of abortion follow discussions of hemorrhage and sepsis, with no distinctions made between the different methods of treating each condition. As a rule, hemorrhage occurs early, while sepsis is a complication of a later date, and presents an entirely new aspect of the case. It has been said that hemorrhage is the only reason for operative interference and that all other abortions would clear up spontaneously if let alone. This is contrary to my experience and I believe it to be erroneous. After having tried the non-interference plan of treatment I have become convinced that it is followed by a much higher percentage of infections. This must not be construed, however, as a plea for operative interference in all stages of abortion. Meddlesome surgery is as dangerous in the early stages of gestation as when the fetus has gone to full term. The man who cures all of his patients, irrespective of the state in which he finds them, will have a high mortality rate due to puerperal sepsis. Personally I am of the opinion that the two extremes, curettage of all patients, or curettage of none, have no place in the treatment of abortion. I believe, though, that the dead products of conception are better out of the human body if they can be removed safely. However, forceful and violent cervical dilatation, made with either the finger or instrument; vigorous and rough use of the sharp curette; packing the uterus very tightly with large quantities of gauze, in any stage of an abortion: these are types of operative interference which are almost sure to be followed by complications.

While it is surprising how much trauma and laceration nature will stand when due to normal delivery, she resents most emphatically a much less degree of roughness at the hands of man; and without doubt the disrepute that has attached itself to operative interference has resulted from the manner in which the early pregnant uterus has too frequently been handled.

For the sake of convenience let us classify abortion as septic and nonseptic. Quite a number of factors enter into the treatment of either type. Complications often make treatment extremely difficult. For instance, to empty safely an adherent, retroverted uterus with an undilated cervical canal, is sometimes a difficult procedure. A woman with diseased tubes and adhesions should be handled with the greatest care, as a disastrous

or fatal peritonitis might result from undue manipulation of the uterus. In several instances in my own practice, the presence of fibroids in the muscular structure of the uterus has seriously interfered with the removal of the dead products of conception. Sometimes the uterus contracts in the middle, producing an hour-glass contraction, with the fetus, placenta, etc., implanted in the upper segment. These are conditions that should be given serious consideration, and to overlook any of them is to invite disaster.

Abortion when not complicated by interference—in other words, spontaneous abortion—is many times completed by nature, and unless the products of conception are not delivered, is rarely complicated by sepsis. The criminally induced abortion always carries with it the serious danger of sepsis, resulting from instrumental contusion and contamination of the cavity of the uterus or from the products of conception themselves.

Hemorrhage is always an indication for operative interference and should not be delayed too long, as exsanguination results in diminished resistance to infection. Many times the cervical canal is widely dilated and the fetus with the placenta and secundines lie adjacent to the inner portal of the uterine cavity, and their removal is a comparatively simple matter. Other times an injection of pituitrin is all that is necessary. If instrumentation is resorted to, it is always advisable under these conditions to forego the sharp curette and use either a blunt-nose sponge forceps or the gloved finger. I know of no agent more capable of cleaning the cavity of the uterus with so little harm as the gloved finger. Forcing its entrance into the cavity should never be done.

Because the gloved finger is the best curette under certain conditions does not mean that one is justified in trying to force a blunt, stub-nosed index finger through an insufficiently dilated cervical canal. The sad picture of an individual, with one hand behind the pubes while an assistant holds a volsellum which repeatedly pulls out of the cervix, trying to force the index finger into the cavity of the uterus, is not an uncommon one. Volumes have been written about the wonderful work that can be done with the finger as a curette, to all of which, under certain conditions, I agree, with the stipulation that there be sufficient dilatation of the cervical canal; and if sepsis exists, that there be no involvement of the appendages and parametrium. I am satisfied that the sharp curette has no place in our armamentarium. It can do nothing that cannot be accomplished with the dull curette and the blunt forceps. With either of these instruments, used cautiously, very little harm can be

done. The human being does not exist who can wield a sharp curette inside the cavity of the uterus and know whether or not he is damaging its walls or cutting through that oftentimes thinned-out structure. I am satisfied that more harm than good has resulted from its use.

Rapid and forceful dilatation of the cervical canal is a dangerous procedure; this is especially true if the Godell type of instrument be used. Once its curved expanding jaws open within the uterine cavity, no man can tell exactly what will happen. Numerous instances of ruptured uteri have been reported. As a consequence a previously uninfected abortion is converted into a condition which may require a hysterectomy in order to save a life. If the Godell dilator is used, great caution must be exercised in opening its jaws. It is far better to dilate slowly and carefully with graduated sounds of the Hegar type.

With the emptying of the uterine cavity comes the question of intra-uterine irrigation and packing. Without doubt many cases of infected tubes and peritonitis result from following either of these procedures. I believe the sharp curette and the intra-uterine irrigating nozzle should be relegated to oblivion. Their very existence in one's tool kit is a menace. Packing the uterine cavity under certain conditions is a very useful procedure. As a means of controlling hemorrhage it has no superior. It should never be too tightly done, and in order to be accomplished successfully there must be sufficient enlargement of the cervical canal. The uterine walls can be easily punctured by a dressing forceps carrying a strip of gauze. I believe that uterine irrigation and tight packing are common causes of endometrial implants in the abdominal cavity.

The treatment of infected abortions depends upon the stage of the infection. Operative interference is justifiable early in its existence. Once the uterus is infected, greater care must be exercised than at any other time. Nature becomes very busy at this time, erecting a local and constitutional defense wall against the infection. It is of the greatest importance that the local defense line be not disturbed or broken up. If the infection and inflammation can be confined to the uterine body, the chances for recovery are greatly enhanced, and the prospect of damage to the other organs is lessened. Once the infection has spread into the parametrium and the ovaries and tubes, with resultant localized peritonitis, it is extremely dangerous for one to attempt operative interference within the cavity of the uterus. By this time sapremia and more or less septicemia exist, and the treatment should consist of aiding nature in the fight against the infection. If ever there is a time to proceed cautiously, it is now. Watchful waiting, with application of an ice bag, rest in bed in the Fowler position, relief of pain, and proper feeding, will many times carry the patient through the stormy period. When the infection spreads into the parametrium, abscesses both within and adjacent to the tubes often form. Once a diagnosis of this condition is made, a posterior colpotomy is justifiable; care being

taken, however, not to break through the layer of plastic lymph nature has thrown over the inflamed area. If this is disturbed or broken through, general peritonitis may result. There is often persistent vomiting. This is generally relieved by gastric lavage and use of the Connell apparatus for duodenal drainage. I am satisfied that this agent is a wonderful factor in affording comfort and saving lives of these patients. Outside of morphin for relieving pain, medical treatment is of little avail. Constipation generally exists, but cathartics are never advisable. A loop of ilium can be brought through the abdominal wall, and drainage instituted for the relief of obstruction and tympanites. This, however, is rarely necessary if the Connell apparatus is used immediately on the onset of vomiting. Its introduction should never be delayed; its early use may save the patient's life. Intravenous injections of mercurochrome have not been successful in my hands. Blood transfusions and intravenous injections of normal saline and glucose are of great value. Operative interference through the abdomen is rarely successful if attempted during the acute stage of the disease. As a rule infections of this kind run a limited course. Once the blaze has subsided, operative procedure may be indicated and justified.

* * *

JOHN W. SHERRICK, M. D. (350 Twenty-Ninth Street, Oakland).—In the treatment of abortion there are involved certain general principles which apply to practically all cases, but it is most important to individualize and to bear in mind the particular type of abortion and any complicating features with which we are dealing. We are concerned in this discussion, then, with six types of abortion, namely, habitual, retained, threatened, inevitable, incomplete, and infected abortion.

The keynote of the treatment of any type of abortion is intelligent conservatism characterized by bed rest, sedatives, and general supportive measures. This precludes the use of enemas, drastic cathartics, and rough abdominal or pelvic examinations. However, many of these patients sooner or later should be subjected to a gentle vaginal inspection under strictly aseptic precautions. Interference is instituted as demanded by the particular details of a given case and its complicating features.

Habitual abortion presents often a most perplexing problem and should be treated primarily by prophylaxis. This implies exhaustive study and treatment of the patient and her husband for such complications as syphilis, chronic infections, general debilitating diseases, anemia, endocrine and metabolic dysfunction, local pelvic pathology, toxic factors of various types. It is particularly important to abstain from coitus in the early months until the uterus is well out of the pelvis, and in some cases it is better avoided during the entire pregnancy.

Retained abortion presents no particular problem. The condition should be dealt with in only one way, namely, gentle but thorough curettage,

except in the presence of infection of the uterine contents.

Threatened abortion characterized by the usual classical symptoms of pelvic distress, backache and bleeding of variable degree, is treated by complete bed rest, sedatives, and general supportive measures. If the condition progresses to a state where there is free hemorrhage, cervical dilatation and rupture of the membranes, which brings it into the category of the incomplete inevitable abortion, assistance is given as indicated by the particular case. Such a patient should be hospitalized and the cervix inspected to determine the presence of protruding placental fragments and retained clots. Pituitrin is most useful here to aid the uterus in throwing off its contents. If, however, there is free bleeding or prolonged hemorrhage of moderate or even small amounts, or severe distress with no immediate prospect of relief, we favor careful curettage under gas anesthesia to save loss of blood with its debilitating effects that favor sepsis and other complications.

Infected incomplete abortion should be treated with intelligent conservatism, characterized by complete bed rest, semi-Fowler's posture, fluids, adequate nourishment, sleep, ice bags or heat as preferred, relief of pain, general supportive measures, ergot. Curettage here is justified only in event of prolonged or excessive hemorrhage, but this does not preclude careful inspection of the cervix and the removal with a sponge forceps of tissue masses or clots that may be protruding into or from it. In event of pelvic abscesses developing, vaginal drainage through a posterior colpotomy opening may be necessitated later. Here one must avoid undue trauma with its attendant danger of spreading infection to the abdominal peritoneum. Gastro-intestinal symptoms must be dealt with on their own merit, such as gastric lavage, duodenal drainage, etc. Intravenous therapy is limited to transfusion of whole blood, saline or glucose solutions, which measures are often of the greatest benefit. Scarlet fever antitoxin may be used to great advantage in the presence of conditions such as hemolytic streptococcus infection with its marked toxicity, high temperature, rapid pulse, great fluid depletion, blood destruction, extensive cellular infiltration.

Our attitude toward abortion then is one of conservatism and watchful waiting, with the institution of interference as justified by intelligent observation. First, oxytocics to improve the tone of the uterus and aid its emptying in incomplete abortion and routinely after its cavity is emptied. Second, curettage in the noninfected retained abortion and in the incomplete abortion, whether infected or not, in the presence of prolonged or excessive bleeding. In case of doubt in this particular instance, we prefer to err on the side of radicalism. Third, general supportive and special measures as warranted in any particular problem.

Where interference is indicated, we favor curettage and the use of a blunt-nosed sponge forceps, but not the use of a cervical and vaginal pack. We have no hesitancy in using a medium type of curet, neither dull nor sharp, but we do try to

avoid too vigorous scraping and excessive pelvic manipulation as well as too forceful and too extensive and, therefore, damaging dilatation of the cervix. For this latter reason we rarely, if ever, attempt to cleanse the uterine cavity with the gloved finger.

One cubic centimeter of pituitrin is administered routinely before curettement to give tone to the uterine musculature and thus render it less liable to perforation by the curet. We use the Starlinger uterine dilator followed by the Godell instrument, the force being controlled by the sense of touch, thus avoiding too forcible dilatation with extensive cervical damage. The uterine cavity is sponged routinely with an iodine pack immediately following curettage. Occasionally we resort to irrigation of the uterus with an antiseptic solution at 115 degrees. This evacuates shreds of tissue and clots and is an excellent aid in increasing uterine tone.

The presence of complicating pelvic pathology such as fibromata, diseased tubes, ovaries, etc., does not materially alter our immediate treatment of abortion as we prefer to follow the general plan outlined above, leaving these factors for later consideration whenever possible.

* * *

PHILIP H. ARNOT, M. D. (490 Post Street, San Francisco).—There is no absolute rule that one can follow in treating an abortion case. However, a good working rule is to keep these patients flat in bed, give them a sedative such as codein, paregoric and viburnum, or morphin, and await developments. No one can tell whether the fetus is dead or alive, even in cases with moderate bleeding, so, I believe it is best to give the fetus the benefit of the doubt as long as there is no risk to the mother. In a rather large percentage of threatened abortions the bleeding will stop with bed rest and sedatives and the patient will go to term and have a perfectly normal child.

In most cases after the fetus dies the entire products of conception will pass spontaneously within a few days, and hence curettage will not be necessary. In a smaller percentage of cases there will be fever or hemorrhage or a dilated cervix with the products easily felt in the cervix or there will be a question if all of the products have been passed. What to do with these patients?

A patient who has bled or is bleeding enough to show signs of anemia should have the uterus evacuated as quickly as possible. If hemorrhage has been real severe a transfusion of blood will not only combat shock but will help build up the patient's resistance to infection.

Fever in the great majority of cases is due to a so-called putrid or saprophytic endometritis. This is not a true infection of the uterus, but is an infection of the dead and necrotic products of conception and decidua which are retained within the uterus. The infection of this material produces toxalbumoses and ptomains, which irritate the endometrium and excite a tissue reaction. The usual organisms are anaërobic streptococci and

Bacillus coli. The fever is usually high (101 to 104 degrees Fahrenheit), there is much perspiration, generalized aching and malaise and moderate tenderness of the uterus. Immediate evacuation of the uterus is indicated and is usually followed by a rapid drop in temperature, reaching normal in four to six hours.

In cases where the cervix is dilated and the products of conception can be felt and where there is no fever or hemorrhage, it is best to give pituitrin (one-half of a cubic centimeter every hour for four doses) and ergot with the hope of forcing the products out of the uterus. This will work in many cases, but if it has not at the end of twenty-four hours, the uterus should be evacuated.

In some cases, particularly around three to four months, a patient will pass just the fetus or only a small piece of the placenta so that one is sure that the uterus is not completely emptied. Unless fever or hemorrhage demands immediate evacuation it is best to try pituitrin and ergot for twenty-four hours before resorting to surgery.

There is always a question what to do in cases with a definite peritonitis or a septicemia. With peritonitis present I believe that the uterus should be left alone and all efforts bent toward treating the peritonitis—ice bags on the abdomen, intravenous glucose and subcutaneous saline, sedatives and the Connell suction apparatus in case of vomiting. However, severe hemorrhage would justify operative interference.

With septicemia present I feel that the uterus should be emptied only in case of hemorrhage or where the products can be felt within the open cervix or where one is sure that the uterus is not completely empty. Blood transfusions help, along with sedatives, fluids, and general supportive treatment. I have used intravenous mercurochrome in one case, but with no success.

As to the operation or method in emptying the uterus, I prefer to call it an evacuation of the uterus rather than a curettage, as I do not use nor advocate the use of a curet. One can use a sponge stick or a fenestrated forceps and completely clean out the uterine cavity. The uterine cavity is then swabbed with tincture of iodine and a plain gauze pack is inserted and removed in twelve to twenty-four hours. No intrauterine irrigation is advisable. The cervix seldom needs any dilatation, but where it is necessary the graduated dilators, such as Hegar's, are used to gently dilate the cervix.

Rarely one may have a parametrial, tubal, or cul-de-sac abscess, which should be opened and drained through a posterior colpotomy opening.

Ergot should be given in all postoperative cases for about three days, and in all septicemia and peritonitis cases.

Last but not least, do not forget the legal angles to this subject. Have consultation, if possible, on any patient that you have to operate or that is dangerously ill and be sure to report all such cases to your local police. This is for your own protection and should be done regardless of whether it is a spontaneous or an induced abortion.

New Regulations for the Practice of Medicine in Buenos Aires.—The national department of public health has presented a proposed law to the Secretary of National Affairs for the regulation of the practice of medicine. The project will be presented to the house of representatives. The following regulations are proposed: that the only persons authorized to practice medicine or any of its branches are those who have a national diploma or a foreign diploma duly legalized. Foreign physicians with a legal diploma may be authorized to practice in places where there are no legal national physicians, when they have a diploma given in a foreign school, not as yet recognized in Argentina. In this case, however, if a legal national physician comes to that place, the right to practice belongs to the national and not to the foreign physician. Foreign physicians who want their diplomas legalized should take an examination of all subjects studied during the entire course of medicine, and then they must pay 4,000 pesos (about \$1,040) for their licenses. The law would apply to the practice of medicine, dentistry and obstetrics and to roentgenologists, hypnotists and other psychotherapists. Any advertising by physicians and any other persons practicing has to be authorized by the national department of public health. It is considered illegal to specify the time it may require for any cure, to say that any cure is infallible, to use secret or mysterious remedies, and to publish false or inexact statistics compiled from methods used. No physician is allowed to practice pharmacy and medicine simultaneously. Physicians, dentists or veterinary physicians who in any way are engaged in the preparation or sale of specifics, either as owners or as stockholders, are not allowed to practice their professions. However, physicians are authorized to enter into association with capitalists to establish sanatoriums as long as the capitalist does not interfere in any clinical or technical work of the sanatorium. The sharing of fees by physicians, as well as the remuneration given to them from drug stores, opticians and orthopedists, and any other conventional arrangement for the mutual benefit of the physician with some other person or institution, is forbidden. The law considers it advisable that nurses, masseurs, dental mechanics, clinical laboratories, sanatoriums, maternity hospitals, medical and physical therapy clinics and eye clinics, should be under special regulations. This bill has been presented to congress for consideration. The laws that now govern the practice of medicine were made long ago and do not deal with certain problems of modern practice.—Buenos Aires *News Letter*. (*Journal of the American Medical Association*.)

Diagnosis and Management of Senile Prostate.—Young is convinced that in prostatectomy the perineal route is not only technically the most satisfactory but also the safest. It is accompanied by a mortality much less than can be obtained through the suprapubic route, whether the operation is done in one or two stages. The author presents an analysis of 197 consecutive cases of perineal prostatectomy without a fatality. This operation permits the surgeon to see the prostate, to examine minutely any region suspected of being malignant, to carry out operation under visual inspection, and to provide for complete hemostasis and good dependent drainage. These attributes make the perineal route unquestionably the method of choice, and are responsible for its greatly lower mortality.—*Southern Surgeon*.

Pathologic Changes in Tonsils.—Rhoads believes that in many cases simple inspection reveals sufficient evidence for the removal of tonsils. In most cases, however, it is of little importance as compared with the evidence adduced by a careful history, ordinary laboratory examinations, and a painstaking physical examination. Teamwork by the internist and the otolaryngologist is required. If the general examination reveals a systemic disease that is usually associated with focal infection, and other more obvious foci are not discovered, the tonsils should be regarded as probable sources of infection regardless of their external appearance.—*Archives of Otolaryngology*.

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Leaflet Regarding Rules of Publication.—California and Western Medicine has prepared a leaflet explaining its rules regarding publication. This leaflet gives suggestions on the preparation of manuscripts and of illustrations. It is suggested that contributors to this journal write to its office requesting a copy of this leaflet.

EDITORIALS*

THE DEL MONTE ANNUAL SESSION—NEW OFFICERS

Reports of Del Monte Session Will Be Printed in June California and Western Medicine.—The usual date for closing the receipt of copy for an issue of CALIFORNIA AND WESTERN MEDICINE is the twentieth of each month. This year the sixty-second annual session of the California Medical Association was held on April 24-27. Therefore it is not possible to print much news concerning that session because the May CALIFORNIA AND WESTERN MEDICINE will be in press during the time the session is being held.

In spite of adverse economic conditions, the officers of the Association have been hoping for a large attendance at Del Monte. The program printed in the April CALIFORNIA AND WESTERN MEDICINE indicated the splendid standard of the general meeting and scientific section programs. A special effort has been made to secure in advance some of the guest-speaker papers, to insure publication in this May issue. At this time, in anticipation, to all who had places on the program and to all who by their presence and aid made it possi-

* Editorials on subjects of scientific and clinical interest, contributed by members of the California Medical Association, are printed in the Editorial Comments column, which follows.

ble for this year's annual session to go over in successful fashion, the thanks of the Association are extended.

According to custom, the place of next year's annual session will in all probability be decided upon before the close of the last meeting of the House of Delegates. In that event, the time and place of the next annual session will be printed at the top of the front cover of this issue. If you are of those who did not find it possible to go to Del Monte this year, it is hoped that at next year's session you will be registered as among those in attendance.

* * *

Good Wishes to Retiring President Joseph M. King and to President George G. Reinle.—The California Medical Association extends to Dr. Joseph M. King of Los Angeles its appreciation of the services he has rendered during the last year in visiting many of the component county societies and in helping guide the central organization along safe and constructive paths. The fiscal year which came to a close at Del Monte presented many new and difficult problems which needed clear thinking and wise judgment in their solution. In this work Doctor King gave of himself unsparingly. As he joins the group of former presidents, he has the good wishes of the members of the California Medical Association.

At the end of the session, President-elect George G. Reinle of Oakland took up the responsibilities of the presidential office. In days like the present, the turmoil of new conditions is as evident in the domain of medical activities as it is in our political and civil life. Doctor Reinle's long interest in medical organization work will make him a valuable leader in the continued study of some of the major problems of medical practice to which the California Medical Association has been giving special attention. He may be assured of the generous and loyal support of his physician colleagues.

* * *

Greetings to the New President-elect, Dr. Clarence G. Toland of Los Angeles.—The newly elected President-elect is Dr. Clarence G. Toland, one of the well-known surgeons of Southern California. Doctor Toland is an ex-president of the Los Angeles County Medical Association and has long been interested in medical organization work. As there were no other nominations, Doctor Toland was elected by acclamation.

* * *

Minutes of Council Meetings at the Annual Session.—In order to make it possible for members who were not in attendance at the annual session to get at least a partial orientation of the business proceedings at Del Monte, this issue of CALIFORNIA AND WESTERN MEDICINE will be placed in the mails several days later than usual. This delayed publication will permit the printing of the Council proceedings, with information concerning business acted upon and officers and committeemen who were elected. (See pages 386-395.)

Several officers of the Association made requests to be relieved from further service on the Council or on committees. Mention may be here made of three of such who, at this annual session, retired from the group of active official workers. Dr. O. D. Hanlin of Oakland, for many years the efficient chairman of the Council, because of many other responsibilities, requested that he be not reelected. The new chairman of the Council is Dr. T. Henshaw Kelly of San Francisco. Two other members of the Council who have long given loyal and able service to the Association and who requested that their names be not placed in nomination were Drs. William Duffield of Los Angeles and Robert A. Peers of Colfax. These and other officers who retired have the thanks of the Association for their past services.

It was voted to hold the 1934 annual session at Riverside, date to be announced later.

The total registration at Del Monte was a pleasant surprise, more than eight hundred members being in attendance. The Council minutes give additional information. The minutes of the meetings of the House of Delegates will be printed in the JUNE CALIFORNIA AND WESTERN MEDICINE.

THE LEGISLATIVE SITUATION

Proposed Public Health Legislation Being Watched.—If space permitted, a summary or digest of some of the proposed laws having public health and medical practice relationships would be printed in this issue of CALIFORNIA AND WESTERN MEDICINE. The lists and data previously given must suffice, however, until reports from the Committee on Public Policy and Legislation will make it possible to give more detailed information to the readers of CALIFORNIA AND WESTERN MEDICINE.

All that has been previously stated in this column concerning the very large amount of proposed public health legislation and the heavy tasks which must be met by the representatives of the California Medical Association, still applies. For the time being, members who attend the Del Monte annual session must be depended on to carry back to their county societies the information given in the reports made at that session.

The newspaper press states that the legislature will recess some time in May, to reconvene later. Just what effect that new procedure will have on the course and final disposition of measures now under consideration in the senate and assembly is difficult to state. However, the representatives of the California Medical Association are alert to their responsibilities in these matters and may be depended upon to keep the component county societies in touch with all important changes.

ANTIVIVISECTION PROPAGANDA—SENATE BILL 674 (FELLOW)

Another Proposed Antivivisection Law for California.—On January 27, Senate Bill 674 was introduced by Senator Fellow. At this writing, there are eleven notations in the "Senate Weekly History" concerning senate actions taken thereon.

The senate passed the bill and it has gone over to the assembly, where it was referred to the Committee on Public Health and Quarantine, Assemblyman William W. Hoffman of Oakland, chairman. A first hearing is scheduled for Wednesday, April 26.

The title of the bill is as follows:

"An Act to regulate the conduct of pounds, prescribing the duties of persons in charge thereof or employed thereat, and regulating the disposition of animals impounded or sheltered therein."

* * *

Misleading Nature of the Title of the Bill.—On perusal the above title seems innocent enough. The text of the bill, however, reveals that it is a typical antivivisection measure: one of these emanations which, if the proposed measure should by chance become a law, directly and indirectly would mean loss of human life in the days to come. All this because of the enactment into law of a misguided attempt on the part of the bill's proponents to presumably protect dogs, cats, and other dumb beasts from imaginary and cruel experimentation by scientific investigators and physicians. No one denies the honesty of purpose of some of the antivivisectionists. But by and large, that group must be judged not by well meaning though misled persons, but rather by the mawkish sentimentalists who close their eyes to human suffering and unnecessary death in order, in self-laudation to themselves and one another, to live in a self-constituted world of super-kindness to lower animals.

From the standpoint of scientific medicine and of real humanitarianism, as well as of kindly feeling and action to all members of the animal kingdom, it may be stated that some provisions of this proposed law are little less than vicious. The supporters of the measure are carrying on the usually aggressive and misleading campaign so generally in operation when so-called antivivisectionists appear in legislative hearings. It is not necessary in these pages to go into details concerning this year's antivivisectionist effort as expressed in Senate Bill 674. It is enough to know that research workers such as Karl Meyer of the Hooper Foundation of the University of California are a unit in opposing it, because of the havoc it would produce to scientific studies which are aimed at prolonging human life.

* * *

Excellent Criticism of the Antivivisectionist Propaganda by Chester Rowell, Esq.—Attention is here called to the splendid criticism which this proposed law drew from that well-known California publicist, Chester Rowell, Esq., of Berkeley, and which was printed in his "World Comment" newspaper columns. So excellent and unbiased is his portrayal of real facts, that CALIFORNIA AND WESTERN MEDICINE is printing his original article (and also the second article which he wrote when criticisms of his first article came to him) in order to give a place in the indices of medical literature to this masterful exposé of current antivivisectionist fallacies. (See page 352.)

The thanks of Californians, who love their human fellows and lower animals as well, are extended to Chester Rowell for this voluntary service which he has so ably rendered to the citizens of his state and country.

* * *

An Example of Antivivisectionist Propaganda. By way of contrast to the sane presentation of facts given by Mr. Rowell, reference is also made to a letter which a few days ago came to the editor and which is reprinted in the correspondence column of this issue.* With that letter several pamphlets full of misleading statements and illustrations were enclosed. They contain irresponsible assertions such as are referred to by Mr. Chester Rowell in his articles. Members of the profession who wish to get a first-hand knowledge of the kind of literature distributed by the National Antivivisection Society, 58 East Monroe Street, Chicago (from which the referred to letter was received), will probably receive samples of such by making request to that organization for some of their antivivisectionist literature. The following, a black-face type footnote to one of the pamphlets, tells its own story:

"*What Is Vivisection?—Vivisection is the practice of subjecting living animals to cutting operations, inoculation experiments and other experimental treatments such as baking animals alive, sex gland tortures, pouring boiling water into intestines, suspending dogs by ears, and removing nerves, putting mustard oil in cat's eyes, etc., etc. Usually these experiments are performed without the use of anesthetics."

The sad part of the story is that such stuff is sent out to many citizens, and is accepted as being the truth by some. It is regrettable that copies of Mr. Rowell's comments cannot be sent to all persons on the mailing lists of California antivivisectionist organizations.

EDITORIAL COMMENT[†]

RELAPSING FEVER—A NEW ETIOLOGICAL OBSERVATION

As its name implies, relapsing fever is an acute infectious fever characterized by recurrent attacks, separated by afebrile and otherwise symptomless intervals. This disease is endemic in certain countries and at times becomes epidemic, as noted in Serbia during the Great War, numbering twelve thousand cases, the vector in this incident being the louse.

Relapsing fever and typhus are frequently associated and are both apt to occur during periods of depression, war, overcrowding and famine. David Livingston, in 1837, found in South Africa that a peculiar relapsing fever occurred following the bite of a tick. Tick or relapsing fever spreads along the caravan routes in Africa and Asia Minor and occurs sporadically in Panama, Mexico, and Southern California.

* Letter is printed on page 402.

† This department of CALIFORNIA AND WESTERN MEDICINE presents editorial comment by contributing members on items of medical progress, science and practice, and on topics from recent medical books or journals. An invitation is extended to all members of the California and Nevada Medical Associations to submit brief editorial discussions suitable for publication in this department. No presentation should be over five hundred words in length.

The infective organism is due to a large spirillum discovered by Obermeier in 1868, a spirochete of the genus *Spironema*. It has been definitely determined that the mode of transmission is not by the direct bite of the louse but by the liberation of the spirochetes due to the accidental crushing of the infected vector by the host. Bedbugs or blood-sucking insects biting an infected patient during the febrile state may transfer the spirochete to a well person if bitten. The life cycle of the *Spironema* in man is about a week, multiplying so greatly that in severe cases they become as numerous as the red cells. This stage lasts several days, then disappears completely from the peripheral circulation (so that none may be found by smear) for about a week, then a recurrence, with reappearance of the spirochetes. This cycle may take place several times. During the apyrexia stage they are present in the spleen, where they may be actively phagocytized, eventually to be destroyed by the antibodies of the host. The vectors are the body and head lice and a species of tick belonging to the genus *Ornithodoros*. In the United States a member of this species is found in Texas, Mexico, and California.

In the case report* submitted by the writer the genus *Ixodes*, possibly the transmitter of the spirochete, was found on the infected rodents whose blood showed positive findings and which succumbed to the infection.

University of California.

ROBERT T. LEGGE,
Berkeley.

CONTRAINDICATED VACCINES

IV[†]

Ten years ago few immunologists questioned the logic which led to extensive clinical trials of specific pneumococcus vaccines as adjuvants in the treatment of acute lobar pneumonia.

Theoretical objections, however, were raised by the experimental studies of Doctors Felton and Bailey¹ of Harvard Medical School. The Boston investigators found that the injection of certain pneumococcus polysaccharids into laboratory animals so lowered their normal resistance to the corresponding type pneumococcus as to magnify by a hundredfold the usual percentage mortality from simultaneously injected pneumococcus cultures.

This finding has been confirmed by Doctors Sia and Zia² of the Peiping Union Medical School, in whose hands the postvaccination "negative phase" following injection of unpurified pneumococcus filtrates led to a ten-thousand-fold increase in specific pneumococcus susceptibility. In their control tests the Chinese investigators found that when small doses of low-virulent pneumococci are injected intravenously into rabbits the organ-

* The reports referred to are printed in the case report department of this issue (see page 370).

† Part I of this series was printed in the February CALIFORNIA AND WESTERN MEDICINE, page 116; Part II in March, page 188; Part III in April, page 275.

¹ Felton, L. D., and Bailey, G. H.: *J. Infect. Dis.*, 38:131, 1926.

² Sia, R. H. P., and Zia, S. H.: *Proc. Soc. Exper. Biol. and Med.*, 29:791 (April), 1932.

isms rapidly disappear from the blood stream, the animals showing few, if any, demonstrable symptoms. The same doses, however, injected into rabbits previously treated with homologous pneumococcus filtrates led to a rapidly increasing bacteremia which usually terminated fatally. This fatality increase could be simulated in nonvaccinated rabbits by multiplying the routine test dose from ten thousand to one hundred thousand-fold.

Since results of this type apparently contraindicate therapeutic pneumococcus vaccines in the early stages of lobar pneumonia, Dr. Victor Ross³ of the Department of Health, New York City, turned his attention to the feasibility of orally administered pneumococcus polysaccharids. Oral vaccines of this type will immunize rats. Specific serological analyses of the blood, urine, and feces of rats thus immunized led him to believe that practically all of the ingested polysaccharid is eliminated in the feces. As much as 85 per cent of it was recovered from this excretion source. Assuming that absorption into the blood stream is a necessary factor in the production of the clinically undesirable "negative phase," Doctor Ross concluded that oral administration of specific polysaccharids is at least relatively safe during the early stages of acute lobar pneumonia.

Laboratory scientists are particularly interested in Doctor Ross's suggested theory that certain cells of the gastro-intestinal mucosa are active in specific antibody production, and can be stimulated to this internal secretion by mere contact with certain specific vaccines. This theory finds some support in the recently postulated "contact transformation" of intracellular enzymes by certain colloidal chemists.⁴ Many theorists, however, would challenge the earlier implied clinical conclusion from "negative-phase" data obtained from highly susceptible laboratory animals. The conditions may be quite different in clinical immunity. Year-long contact with various pneumococci and reciprocal environmental antigens (*e. g.*, with certain fairly common wild yeasts) have already presumably established fairly effective specific pneumococcus immunity in adult man. Under such conditions the "negative-phase" of nonresistant animals may well be replaced by a therapeutically valuable "Hektoen phenomenon," or "allergic cellular response."

Final judgment as to the clinical value of specific vaccine therapy in acute lobar pneumonia cannot be drawn from lower animals.

Stanford University.

W. H. MANWÄRING,
Palo Alto.

A TYPE OF MIGRAINE ASSOCIATED WITH HYPOCALCEMIA*

Idiopathic migraine is becoming a smaller and smaller group as various etiologic factors are being determined. The relation to allergy in a number of these unfortunates is well known and has been recently emphasized by Rowe. The infectious factor particularly, as related to foci around the

distribution of the fifth cranial nerve, also is well recognized.

For two years I have been impressed with the frequency of mild tetanic symptoms associated with these attacks in a certain number of these unfortunates. In this group hyperpnea induces tingling of the extremities and very often there is a positive facial phenomenon. We have observed in the more severe cases actual carpopedal spasm. The blood calcium in this particular group of patients has been found moderately low, *i. e.*, from 6 milligrams to 8½ milligrams per 100 cubic centimeters of blood—the normal being around 10 milligrams or 11 milligrams. Where the calcium is low the attacks have been suppressed by the oral administration of viosterol or the parental administration of parathormone.

The association of migraine with epilepsy has been frequently emphasized in the past. Recently acidosis treatment has been instituted in the therapeutics of the latter condition. It is also recognized that acidosis increases the ionizable fraction of calcium in the circulation.

It is not assumed that all cases of migraine fall into this category, but the work has yielded some very interesting therapeutic results. A complete report of this work will be published in the near future.

350 E Street.

G. F. NORMAN,
Eureka, Calif.

Consultants and Specialists for Panel Patients.—The national insurance system provides only a general practitioner service for panel patients. The provision of a consultant service has often been discussed, but the financial depression has proved a barrier. Panel patients can of course obtain the services of consultants by paying for them, and the British Medical Association has prepared a scheme by which this can be done at a modified fee. The closest coöperation will be maintained with the patient's panel physician, whose approval will be necessary and to whom the consultant's opinion will be communicated. A consultant's list of consulting physicians and surgeons in London whose advice will be available for a fee of \$5 has been drawn up by the association. The list contains more than four hundred names and includes every kind of specialist. A similar reduction of fee has always been possible for necessitous patients. But the scheme has the advantage that the attending practitioner will not have in each case to correspond with the consultant in order to arrange for a reduced fee. At present either this is done or the patient attends the outpatient department of a hospital and the consultant receives nothing for his services. Under the scheme the patient will be saved the great waste of time involved by attendance at a hospital. A number of benefit societies have already established for their members a list of consultants willing to see members at a reduced fee. But the British Medical Association objects to such lists on the following grounds: (1) The list is a closed or restricted one, controlled by a non-medical organization. (2) The circulation to members of a particular society as to the arrangements is contrary to the dictum of the General Medical Council. (3) There is no income limit, except so far as this is represented in the status of the particular society. In view of the list of consultants established by the association, on which all physicians who satisfy the required criteria may be placed, it is hoped that such closed panels will be abolished and that physicians associated with them will have their names removed.—*London News Letter. (Journal of the American Medical Association.)*

³ Ross, V.: *J. Exper. Med.*, 55:13 (Jan.), 1932.

⁴ Alexander, J.: *Protoplasma*, 14:296, 1931.

* A preliminary report.

C. M. A. DEPARTMENT OF PUBLIC RELATIONS

An open forum for progress notes on the department's activities, and for brief discussions on medical economics. Correspondence and suggestions invited. Address Walter M. Dickie, Room 2039, Four Fifty Sutter Street, San Francisco. This column is conducted by the Director of the Department.

Tentative Guiding Principles for Group Hospitalization*

Group hospitalization should be organized so as to benefit the three groups concerned—the patients, the hospitals, and the medical staffs.

1. Benefit to the patient is the aim of hospital service, and group hospitalization plans should be established with this public service in view. The primary purposes of group hospitalization should be to enable persons of limited means who value their independence to pay for their own hospital care, and to make possible the systematic inclusion of hospital costs in family budgets.

2. Hospitals should be adequately remunerated. They should be paid reasonable sums for services rendered to patients under group hospitalization plans; "reasonable sum" means a sum approximately equal to operating costs, but need not be unduly fixed charges. In any event the subscriptions should more than cover the service costs incurred on behalf of the subscribers. Profits should not be sought under this system.

3. Group hospitalization should be so administered as to encourage high standards of medical care.

4. Participation by hospitals in group hospitalization should be coöperative rather than competitive. Group hospitalization plans should, therefore, include all hospitals of standing in the community.

5. Group hospitalization plans should not be commercialized. Skilled and experienced guidance is required in actuarial matters and the promotion and business management of such plans, but administrative expenses should be kept within the narrowest limits compatible with such service. Hospitals should not enter into contracts with business agencies which have the finances and management of such plans wholly under their control.

SUGGESTED PROCEDURES FOR GROUP HOSPITALIZATION PLANS

1. *Exclusion of Professional Fees.*—Subscribers will be accepted for hospitalization only upon recommendation of a physician. The plan should not interfere with patient and physician or physician and hospital. Group hospitalization plans are not intended to cover any but hospital charges and should not include payments for services rendered by private physicians.

2. *Choice of Hospital by Subscriber.*—The group hospitalization plan should be such as to render its benefits available in any participating hospital selected by a subscriber to which his physician has access or is acceptable.

3. *Admission and Treatment of Patients.*—Patients under group hospitalization plans should be admitted in the usual manner at the initiative of their physician and should be cared for under the regular hospital rules governing professional services. The arrangement of professional fees between physician and patient should be regarded as a private matter not affected by the plan. The plan should be so devised as to avoid requiring hospitals to change their established policies with reference to medical staff or medical classes of patients admitted.

4. *Groups Preferable to Individual Subscribers.*—The enrollment of individual subscribers requires higher costs in initiating and administering the plan and fails to develop a feeling of group solidarity. If subscribers

are individually enrolled, they should be accepted only upon voluntary application and should generally pay a higher subscription rate in fewer installments. So far as possible the plan should be based upon arrangements made with subscribers regularly employed as members of already associated or organized groups.

5. *Employed Persons.*—In some cases employed persons become eligible only after a definite period (one month to three months) of employment. Physical examinations are not required where large groups are simultaneously enrolled.

6. *Waiting Period.*—Benefits accrue only after a waiting period (one to two weeks) from the time the membership begins. Where subscribers are individually enrolled, the waiting period should be somewhat lengthened.

7. *Hospital Benefits.*—In so far as possible the annual subscription should cover all hospital charges to a patient. All routine hospital services should be included as a minimum, and special or additional charges should be eliminated as much as practicable. Extra charges for diagnostic and "special" services discourage prospective subscribers, and fail to provide protection for the patient on important costs. Benefits do not as a rule include hospital service of a kind not ordinarily rendered by community hospitals; thus acute venereal diseases, pulmonary tuberculosis, quarantinable diseases, and mental diseases are usually excluded; obstetrics may be included after a reasonable waiting period.

8. *Stages in the Development of a Group Hospitalization Plan.*—(a) There are three stages in the development of a plan. First, what may be called the technical stage, during which the hospitals themselves, with such legal and other advice as may be required, determine upon the services to be offered and the rates which they believe to be practical. Second, the promotional stage during which this plan has to be organized in working form and accepted by groups of persons who are ready to pay for the services offered. Third, the administrative state when the plan is actually in operation and must be capably managed.

(b) In a community with only one hospital, what is referred to above as the technical stage should be developed by the governing body of the hospital, with the counsel of its medical staff.

(c) In communities with more than one hospital of good standing the initial stage of the plan should be carried through by a representative group of organization of hospitals themselves with the counsel of physicians of standing representing the hospital staffs and, if possible, the local medical societies.

9. *Effective Presentation to the Public.*—The problems of promotion and of enrolling groups of subscribers are not ordinarily familiar to hospital personnel and generally will require the participation of expert and experienced persons. In some instances it may be best to appoint a private agency, specializing in such work, to render service or to furnish persons who will render expert services, but payments to such agency should not be such as to diminish unduly the benefits received by subscribers. The control of the plan, as well as the direction of activities incidental to it, must remain in the hands of a group organized by or through the hospitals, on a nonprofit basis, and must not be transferred to an enrolling agency.

10. *Legal Advice.*—During the first or technical stage, group hospitalization plans should be discussed with competent legal counsel in order to insure that they conform to the laws of the state and locality. Insur-

* Reprint of an article by C. Rufus Rorem, Ph. D., in *Western Hospital Review*, March, 1933.

ance Commissioners in more than a dozen states have ruled that hospital service rendered to subscribers on an annual payment plan is not insurance.

11. *Finances.*—In existing group hospitalization plans, from \$6 to \$12 per year is the range of rates charged. The amount required will vary with the general cost levels of the locality, with the scope and character of services offered, with the age and occupational character of the subscribers, and according to the requirements for promotion and administration.

A time limit on the length of stay of all patients in the hospital during any given illness is usually requisite and is usually a three-week period. In order to forestall the distintegrating effects on the plan of widespread disaster, it is usually provided that in case of such an event the hospital rendering the needed service should reimburse the subscriber with a specified amount, say an amount equal to the annual subscription (in a few instances twice this amount) if such subscriber must be denied admission.

When risk or expense is reduced by the enrolling of a large number of subscribers in a single group, or when the group is of such age or occupational class as to lower the risk, a reduction in the annual subscription rate may be allowed.

The basis on which hospitals are to be paid from the central fund should be alike for all, when similar services are offered to subscribers.

If estimates based upon past experiences indicate that the payments to be made will be sufficient to enable the fund to reimburse participating hospitals at a given rate per day (whether this be \$5, \$5.50, \$6, \$6.50, or \$7) a fraction of this amount (50 cents to \$1 per day) may wisely be withheld for distribution in whole or in part at the end of the fiscal year in order to insure an equitable administration of the fund in case the morbidity rate for the year should be unexpectedly high.

The only question arises, how about the possibility of malingering or undue utilization or abuse of the plan? Patients are accepted in the hospital only on advice of physician and usually the criticisms arise from physicians. The solution of the problem is in the hands of the physicians. This solution of group hospitalization to a continuing problem did not arise with the depression. It will not disappear with the return of prosperity, whenever that is. It is a practical step to distributing cost, stabilizing hospitals, serving people of limited means.

CANCER COMMISSION OF THE C. M. A *

Report of Committee on Bone Tumors

CLASSIFICATION

The committee feels that a uniform classification is of major importance and recommends that the classification of the Bone Sarcoma Registry of the American College of Surgeons be used. This is recommended for general use in outline only, and the detailed classification should be left for those who, because of specialization, may be interested in details. Inasmuch as this classification is different from older ones, the previously employed terms are grouped under their respective present headings in order to make clear what this classification means in terms of older nomenclatures.

The *American College of Surgeons' classification*, with synonymous terms, follows:

1. Metastatic tumors.
2. Periosteal fibrosarcoma (fibrosarcoma).
3. Osteogenic tumors.
 - A. Benign.
 - a. Exostosis.
 - b. Osteoma.
 - c. Chondroma (myxoma).
 - d. Fibroma.

B. Malignant—osteogenic sarcoma (to include spindle cell sarcoma, round cell sarcoma, osteosarcoma, chondrosarcoma, mixed cell sarcoma, angiosarcoma, perithelial sarcoma, bone aneurysm, etc.).

- a. Anatomic types.
 - Medullary and subperiosteal.
 - Periosteal.
 - Sclerosing.
 - Telangiectatic.
- b. Undifferentiated sarcoma.

4. Inflammatory conditions that may simulate bone tumors.

- a. Myositis ossificans.
- b. Osteoperiostitis.
 - Traumatic.
 - Syphilitic.
 - Infectious.
- c. Osteitis fibrosa (including bone cyst).

5. Benign giant cell tumor.

6. Angioma.
 - Benign.
 - Malignant (angiosarcoma).

7. Ewing's tumor (endothelial myeloma).

8. Myeloma.

In general these tumors can be grouped into three classes—a grouping which is of value from the standpoint of treatment and of prognosis.

Those that are benign, and therefore curable, include exostoses, osteoma, chondroma of the phalanges, fibroma, bone cyst, and giant cell tumor.

The malignant tumors, the larger percentage of which are incurable, include osteogenic sarcoma, endothelial myeloma of Ewing, myeloma, and metastatic tumors.

The third group, which is on the border line, and which may possibly present a hopeful prognosis, includes central chondromas (except phalangeal) and atypical sarcoma.

SYMPTOMATOLOGY AND CLINICAL SIGNS

Certain symptoms and signs call attention to the possible presence of a bone tumor. These constitute presumptive evidence only and can be considered only in the light of all data.

Pain is usually the first symptom in malignant tumors of bone, and it may be noted some days or weeks before a swelling is observed, depending somewhat upon the location of the tumor. The pain is at first intermittent in character, varying in intensity and worse at night. Furthermore, it is not influenced by position or mobility, a factor which distinguishes it from the pain of tuberculosis. *Unexplained persistent pain in the region of bone or joint structure with or without history of trauma should call for repeated x-rays at intervals of two to four weeks until definite diagnosis has been established.* The committee deplores the frequent diagnosis of rheumatism without x-ray examination in persistent pain.

Pain may also be the first symptom of border-line or benign tumors; but it is likely to be a less severe pain and of more gradual onset.

*Age of Onset.**—Although primary malignant bone tumors on the whole have a predilection for youth, the age of onset is of little diagnostic significance in differentiating benign from malignant tumors.

Antecedent Trauma.—History of antecedent trauma may be obtained, but a history of injury before the discovery of a bone tumor is by no means to be taken as evidence that the tumor was in fact caused by the injury.

Pathologic Fracture.—Pathologic fracture as the initial symptom (the first indication of trouble) commonly occurs in the bone cyst (osteitis fibrosa), may occur in giant cell tumor or chondroma. Pathologic fracture may occur in the course of malignant bone tumor, but seldom if ever presents as the initial symptom (except occasionally in metastatic lesions).

*Location.**—Even though bone tumors may occur in any bone, they have sites of predilection in certain long bones; and, except in Ewing's sarcoma, for the ends of them. Joints, as a rule, are rarely invaded until late.

*The Cancer Commission was brought into being by the House of Delegates of the California Medical Association to aid in the furtherance of all efforts to combat cancer. The roster of officers and the central office of the Commission to which communications may be sent is printed in this issue of CALIFORNIA AND WESTERN MEDICINE (see front cover directory). This column is conducted by the Secretaries of the Commission.

*For age of onset and for tables of favorite sites of the various bone tumors, see Charles F. Geschickter and Murray M. Copeland, "Tumors of Bone," *American Journal of Cancer*, 654 Madison Avenue, New York.

Duration of Symptoms.—In a very general way the duration of symptoms may be helpful in differential diagnosis. Tumors with a history of less than a year are likely to be malignant; tumors with a history of over a year are likely to be benign. Where a lesion has been present for a period longer than a year and it assumes renewed growth, malignant change must be suspected. This applies especially to osteochondroma or central chondroma in a long bone.

Systemic Reaction.—Fever and leukocytosis may occur in the more rapidly growing tumors. Increased local heat may be detected in many cases. Until metastases have occurred, the general well-being of a patient is good.

DIAGNOSIS

A thorough history should be taken and a complete physical examination made in all cases of possible bone tumor. These should include search for a primary focus elsewhere to rule out the possibility of the bone condition's being metastatic. The history should also bring out the previous removal of any tumors of any location. An exact diagnosis of these previous tumors should be made by study of the original microscopical sections.

Blood counts should be made, remembering that leukocytosis may be increased in a tumor as well as in osteomyelitis.

Bence-Jones protein in the urine suggests multiple myeloma, but may occur in metastatic carcinoma. Its absence does not rule out either.

A Wassermann test should be done in all cases. A positive Wassermann test, however, does not prove that a tumor is due to syphilis; nor does a negative test with certainty rule out syphilis. In some instances an antiluetic therapeutic test, including potassium iodid, *of not more than three weeks*, is worth while, response being rapid in syphilitic lesions.

X-ray studies should be made from various angles and with varying degrees of penetration. These should include the unaffected as well as the affected side, especially in those cases where the bone changes in the affected area are not marked. On the suspicion of malignancy, x-ray of the chest should be made; and where multiple lesions are suspected, as in Ewing's sarcoma, metastatic carcinoma and multiple myeloma, plates of the skull, spine and pelvis should be included.

THE VALUE OF ROENTGEN-RAY DIAGNOSIS

The committee feels that x-ray is the most important single factor in the diagnosis of bone tumors; but, while most benign and metastatic bone lesions can be diagnosed by x-ray, it should not be used to the exclusion of other diagnostic methods. Only the best x-ray studies that can be made are worthy of consideration, and even with such studies and with full clinical data, uncertainty of diagnosis, especially in early malignant conditions, will often arise.

A detailed discussion of the typical x-ray appearances and their variations in the case of each type of bone tumor would be impossible in this brief synopsis. The committee desires again to emphasize the difficulty of positive diagnosis and to urge that *consultation should be regarded as an essential step in diagnosis*.

TREATMENT

Osteochondromas (exostoses) require no treatment unless they interfere with function or are painful, in which case they should be excised. If not excised they should be closely watched because rarely they may undergo malignant change; and this is especially suggested when growth occurs after years of quiescence.

Chondromas.—Central chondroma in the phalanges (unless associated with myxoma) is curable by curettage. In the long bones and sternum, shoulder and pelvic girdles, chondromas are notorious for the variability of their behavior and for the lack of accurate correspondence between their histologic picture and their clinical course (see report of Pathology Committee). These should never be curetted. If surgically treated, resection or amputation should be done. It is suggested that rarely, however, should surgical treatment be necessary. X-ray therapy usually relieves the

pain and stops the growth; and may be employed indefinitely. External chondromata of the long bones or the chest cage or pelvic and shoulder girdles call for an attempt at resection when interfering with important function. When recognized earlier, x-ray therapy should be given prolonged and thorough trial.

Bone Cyst (Osteitis Fibrosa).—Collapse of the cavity usually causes them to heal. Latent bone cysts require no treatment.

Giant Cell Tumor.—Giant cell tumor is ordinarily amenable to prolonged treatment (several months) by radiotherapy. These tumors do better under radiation therapy if not previously interfered with surgically; therefore biopsy before irradiation is discouraged—certainly, unless the x-ray interpretation is doubtful. It is recognized that these tumors can be cured by surgical curettage and cauterization, but frequently the integrity of the bone or neighboring joint is menaced by the thorough cauterization which must be done to prevent recurrence.

Malignant Tumors.—The only treatment at present offering hope for malignant osteogenic tumors is amputation above the tumor. Disarticulations, as at the hip joint, offer no advantage and are rarely justifiable, if a sufficiently wide margin of normal tissue *and bone* can be obtained without disarticulation. The margin must be ample because of the frequent medullary extensions of osteogenic sarcoma. Resection with safe margin of normal tissue may occasionally be possible; but amputation with an artificial limb ordinarily offers better function than that obtained after resection and bone transplant. The disease rarely, if ever, recurs at the site of amputation when this is done with a sufficient margin. The cause of failure to cure is metastasis, which is existent but unknown at the time of operation. Pulmonary metastasis takes place so early from malignant osteogenic tumors that the percentage of cured cases is very small. It should be emphasized that amputation should never be done except on very positive diagnosis, including competent microscopical examination of biopsy specimen.

Amputation should not be mentioned in the patient's hearing until all consultants are prepared to insist that no treatment except amputation is satisfactory, at which time it should be easier to secure the patient's consent.

Tumors which because of their position are inoperable require thorough and intensive high voltage x-ray treatment.

A short course of intensive preoperative x-ray is of value, especially in the endothelial myeloma (Ewing's sarcoma), since this tumor is sensitive to radiation. Shrinkage of the tumor is characteristic of it following even one or two treatments by x-ray. Its position in the shaft of long bones lessens the number of cases which can be amputated above the tumor. In those cases in which amputation is possible, it should be performed following x-ray therapy.

Radiation alone should be used in all cases which have chest or other metastases; and amputation is not justifiable except for severe pain or a foul fungating tumor.

With regard to radiation therapy, while definite plans recommended for bone tumors are available, it is felt that their inclusion here is unnecessary since such treatment should be carried out only by those well versed in its usage. Details of treatment can be obtained by writing to the Cancer Commission.

PROCEDURE TO BE FOLLOWED IN A DOUBTFUL CASE

If after initial x-ray a positive diagnosis cannot be made, the following procedure should be employed:

1. Start x-ray therapy at once. The recommendation for x-ray therapy is based upon the fact that it cannot make the tumor worse, that the response to x-ray may verify the diagnosis, and that radiation may, and probably does, arrest the growth and spread of malignant tumors, so that the short period of delay does not decrease the patient's chances of a cure.

2. Secure all x-ray films which can contribute to the diagnosis; and complete the clinical work-up. The tumor should be observed by x-ray examination with reference to the effect of the radiation therapy.

3. Have consultation, sending all films and history to a consulting physician or clinic, if the patient himself cannot be transported with them.

4. If malignant bone tumor in an early stage is suggested after these steps have been carried out, perform biopsy, as suggested below.

BIOPSY

Biopsy is positively contraindicated as a primary diagnostic procedure and should be done only after other diagnostic resources have been employed. Biopsy is not needed to complete diagnosis of many bone tumors, and may increase metastases of a malignant tumor or seriously interfere with success of roentgen therapy in certain benign tumors. Biopsy should be done to confirm the diagnosis of malignancy before resorting to amputation.

Preparation should be made for immediate tissue diagnosis and therapeutic procedures (amputation or other) if diagnosis can be positively made from frozen section. If the frozen section diagnosis is not positive, it is recommended that further microscopic study be carried out before amputation, continuing radiation therapy in the meantime.

COLEY'S TOXINS

Occasional reports of cured cases with metastases are made, and a large proportion (approximately 50 per cent) of cured cases in the Bone Sarcoma Registry which have had this treatment suggests that it may be of value. Doctor Coley, himself, uses it prophylactically in all cases of bone tumor following amputation.

Doctor Ewing reports as follows: "We see very few good results from the use of Coley's toxins, but we do see some. The toxins seem to increase the effect of radiation in certain highly malignant tumors. The good effects are rather apparent in a few cases of very cellular malignant tumors, which are also vascular. In these cases the result is uncertain. Yet, I would recommend the use of Coley's toxins in very cellular malignant tumors, especially when general metastases are present."

OSTEITIS FIBROSA AND PAGET'S DISEASE

'Osteitis fibrosa and Paget's disease are not neoplasms themselves, but they are included in this discussion because at times they must be distinguished from bone tumors.

Osteitis fibrosa cystica may involve one or more bones progressively, while Paget's disease involves, notably, pelvis, tibia, and skull. Paget's disease, especially, should be observed closely for the possible development of bone sarcoma.

SUMMARY

1. Persistent localized pain in bone or joint demands x-ray study for possible bone tumor, repeated until diagnosis has been established or pain has subsided.

2. The danger of mistaking benign lesions of bone for sarcoma may be greater than the chance of curing sarcoma by amputation; therefore amputation should not be done until all diagnostic resources have been exhausted, including ample consultation.

3. Radiation therapy should be given while diagnosis is being completed.

4. Biopsy should be the last resort in differential diagnosis and should be done with preparation for immediate therapy if diagnosis can be completed by frozen section.

Respectfully submitted,

C. M. A. CANCER COMMISSION
COMMITTEE ON BONE TUMORS.

Edwin I. Bartlett,	Arthur L. Fisher
Chairman	Thomas R. Haig
Sylvan L. Haas,	M. C. Harding
Secretary	Harold H. Hitchcock
LeRoy C. Abbott	Hugh Jones
Harold D. Barnard	Otto H. Pflueger
Harold Brunn	H. E. Ruggles
N. Austin Cary	William H. Sargent
C. L. Connor	John C. Wilson

Biological Studies.—It has been a matter of common knowledge for years that cancerous tumors sometimes disappear after the patient has been attacked by another disease. This has been observed in the case both of erysipelas and of African relapsing fever. Work has now been undertaken to investigate the matter further by means of a series of experiments in which fowls were inoculated with the tumor cells of actively growing Rous sarcoma and then with spirocheta anserina. It was found that, while most of the fowls died, the tumor disappeared in those which recovered. These experiments have been repeated upon mice (also with sarcoma). In most of the mice who survived an attack of relapsing fever produced by inoculating spirocheta anserina, the tumor reabsorbed and disappeared.—Ninth Annual Report, British Empire Cancer Campaign, 1932.

Late Radium Reaction.—That a reaction characterized by inflammation, increased vascularity and sometimes ulceration or abscess usually follows treatment by radium, is, of course, well known. But this occurs as a rule within from two to four weeks. Instances in which reaction occurs at long periods after treatment are rare; nevertheless, in a series of 620 cases of cancer of the cervix which received treatment by radium there were forty-eight cases of late radium reaction. In most of these patients symptoms of reaction began to show themselves from six to twelve months after treatment. Fourteen months was the longest period observed. Statistics seem to show that cases of late reaction are becoming less frequent; this is due, doubtless, to the use of better methods, including increased filtration. The cause of late reaction is believed to be damage inflicted at the time of treatment upon the finer arterioles in the tissues; the reaction, on this showing, is not a direct effect of the radium on the tissues themselves.—Ninth Annual Report, British Empire Cancer Campaign, 1932.

Pernicious Anemia Following Gastrectomy.—There are now appearing in the literature only too frequent examples of pernicious anemia following gastrectomy. Attention has been drawn to this situation by our better understanding of the etiology of pernicious anemia as a disease in some way dependent upon a hormone present in the mucous membrane of the stomach and the substance of the liver.

The surgeon who resects the stomach for carcinoma should be interested, for he should expect the development of pernicious anemia when all or a large portion of the stomach is removed.

A total of eleven definite cases and five probable cases of pernicious anemia following gastrectomy have so far been reported. In the cases of pernicious anemia following gastrectomy noted above, the average interval between the operation and the development of the anemia was six and one-tenth years, the shortest one and a half years and the longest fourteen years. It is apparent that the great majority of gastrectomized patients do not live long enough to develop pernicious anemia. As time goes on, and earlier diagnosis and improvements in operative technic enable more patients to survive gastrectomy for a significant length of time, pernicious anemia will probably be encountered more frequently.

Partial resection of the stomach may also be a sufficient cause for pernicious anemia. Five of the cases of pernicious anemia described above followed partial gastrectomy. It is not apparent from the descriptions of these cases just which portions of the stomach were resected. The present knowledge of the factor in the stomach controlling blood formation has not localized this function to any particular portion of the stomach.

It is, therefore, impossible to predict how much, and what part of the stomach may be resected without engendering pernicious anemia. The surgeon doing partial gastric resections should keep in mind the possibility of the development of pernicious anemia.—Abstract, *American Journal of Cancer*, Vol. 16, 1932, pp. 427-431.

STATE MEDICAL ASSOCIATIONS

This department contains official notices, reports of county society proceedings and other information having to do with the state associations and their component county societies. The copy for the department is edited by the state association secretaries, to whom communications for this department should be sent. Rosters of state association officers and committees and of component county societies and affiliated organizations, are printed in the directories noted under Miscellany, on the front cover index.

CALIFORNIA MEDICAL ASSOCIATION

GEORGE G. REINLEPresident
CLARENCE G. TOLAND.....President-Elect
EMMA W. POPE.....Secretary-Treasurer

COUNCIL MINUTES

Minutes of the Two Hundred and Thirteenth Meeting of the Council of the California Medical Association

The following minutes were approved by the Council at its two hundred and fifteenth meeting, held at Hotel Del Monte, Del Monte, on April 24, 1933.

Held in the offices of the California Medical Association, Room 2004, 450 Sutter Street, San Francisco, Saturday, March 4, 1933, at 9:30 a. m.

Present.—Doctors Joseph M. King, president; George G. Reinle, president-elect; Edward M. Pallette, Speaker; and Councilors W. W. Roblee, H. J. Ullmann, F. R. DeLappe, A. L. Phillips, K. L. Schaupp, H. S. Rogers, G. G. Hunter, H. E. Zaiser, W. H. Kiger, M. R. Gibbons, J. B. Harris; T. Henshaw Kelly; and George H. Kress, editor; Emma W. Pope, secretary; W. M. Dickie, director of the Department of Public Relations; Charles A. Dukes, chairman of Committee on Public Relations, and Hartley F. Peart, general counsel. Doctor Yoell was present at 3 p. m. to speak on Senate Bill 953.

Absent.—Doctors O. D. Hamlin, chairman of the Council, and Councilors William Duffield and Robert A. Peers.

1. **Call to Order.**—The meeting was called to order by the vice-chairman, T. Henshaw Kelly.

2. **Senate Bill 953.**—Doctor Kelly stated that a number of changes had been made in Senate Bill 953, sponsored by Doctor Yoell, and that Dr. Rodney Yoell was anxious to again appear before the Council on behalf of the bill, and also wished to secure the approval of the Council on his request that Mr. Peart review the bill and inform the proponents of the points wherein it did not meet with the viewpoints of the Council.

Action by the Council.—On motion of Hunter, seconded by Ullmann and unanimously carried, the following resolution was adopted:

Resolved, That Dr. Rodney Yoell be invited to address the Council at 3 p. m. and that his time be limited to fifteen minutes.

3.* (See footnote.)

4.* (See footnote.)

5. **Committee on Public Policy and Legislation.**—The secretary stated that Doctor Catton had submitted his resignation as a member of the Committee on Public Policy and Legislation and the Executive Committee at its meeting on February 4 had appointed Dr. T. Henshaw Kelly, acting member of the committee.

The secretary then read a letter from Doctor Kelly asking that his name be not considered for the permanent appointment.

* Note.—Minutes 3 and 4 refer to matters still under consideration by the Council. Publication will be made in due time by Council secretary.

Action by the Council.—On motion of Gibbons, seconded by Reinle and unanimously carried, the following resolution was adopted:

Resolved, That the resignation of Doctor Catton as a member of the Committee on Public Policy and Legislation be accepted and that he be thanked for his services.

The Council felt that Doctor Harris should nominate a successor to fill the vacancy. Doctor Harris suggested that Doctor DeLappe be elected.

On nomination of Pallette, seconded by Ullmann, Fred R. DeLappe was unanimously elected a member of the Committee on Public Policy and Legislation to fill the unexpired term of Doctor Catton; term expiring April, 1933.

It was the sense of the Council that Doctor Kelly be thanked for the work performed on behalf of the Legislative Committee.

6. **Noon Adjournment.**—At this point, adjournment was taken for luncheon.

7. **Call to Order.**—The meeting was called to order by the vice-chairman, T. Henshaw Kelly. With the unanimous consent of the Council, the chairman then called for consideration of miscellaneous matters on the docket.

8. **Minutes of the One Hundred and Thirty-fifth and One Hundred and Thirty-sixth Meetings of the Executive Committee.**—The minutes of the one hundred and thirty-fifth and one hundred and thirty-sixth meetings of the Executive Committee, as mailed to all councilors, were presented for approval.

Action by the Council.—On motion of Ullmann, seconded by Schaupp and unanimously carried, the following resolution was adopted:

Resolved, That the minutes of the one hundred and thirty-fifth and one hundred and thirty-sixth meetings of the Executive Committee be approved.

9. **Minutes of the Two Hundred and Twelfth Meeting of the Council.**—Minutes of the two hundred and twelfth meeting of the Council, as mailed to all members, were presented.

Action by the Council.—On motion of Schaupp, seconded by Ullmann and unanimously carried, the following resolution was adopted:

Resolved, That the minutes of the two hundred and twelfth meeting of the Council be approved.

10. **Retired Memberships.**—(a) Request from the San Francisco County Medical Society for the granting of retired membership to Helen J. Waterman was presented.

Action by the Council.—On motion of Ullmann, seconded by DeLappe and unanimously carried, the following resolution was adopted:

Resolved, That Helen J. Waterman, Berkeley, member of San Francisco County Medical Society be granted retired membership in the California Medical Association.

(b) Request from the Stanislaus County Medical Society for the granting of retired membership to J. L. Hennemuth, Modesto, was presented.

Action by the Council.—On motion of Ullmann, seconded by DeLappe and unanimously carried, the following resolution was adopted:

Resolved, That J. L. Hennemuth, Modesto, member of the Stanislaus County Medical Society, be granted retired membership in the California Medical Association.

(c) Request from the Yolo-Colusa-Glenn County Society for the granting of retired membership to H. D. Lawhead, Woodland, was presented.

Action by the Council.—On motion of Ullmann, seconded by DeLappe and unanimously carried, the following resolution was adopted:

Resolved, That H. D. Lawhead, Woodland, member of the Yolo-Colusa-Glenn County Medical Society, be granted retired membership in the California Medical Association.

(d) Request from the Los Angeles County Medical Association for retired membership of seven members was presented.

Action by the Council.—On motion of Schaupp, seconded by Phillips and unanimously carried, the following resolution was adopted:

Resolved, That Charles C. Browning, Nannie C. Dunsmoor, George Jennings, William E. McLaughlin, A. S. Wall, and W. L. Yager be granted retired membership in the California Medical Association.

In regard to one other member whose name was proposed, it was stated he was ineligible for retired membership since he had been a member of the California Medical Association for but three years and, according to the constitutional provision, no member is eligible for retired membership who has not been a member in good standing for ten years.

11. Kern County Society.—A resolution adopted by certain members of the Kern County Medical Society asking that the California Medical Association attempt to settle by arbitration the internal disputes of the society was read.

After discussion, on motion of Harris, duly seconded and unanimously carried, the following resolution was adopted:

Resolved, That the matter be left to Doctor Dickie, who shall submit a report to the president and that final authority be delegated to Doctor King with power to act.

12. Annual Luncheon of Officers and Committeemen.—The value of the annual luncheon of officers of the Association and county societies and committeemen was discussed.

It was the sense of the Council that the meeting be held at luncheon on Tuesday, April 25, at Del Monte.

13. Council Meetings.—It was the sense of the Council that the first meeting of the Council be held on Sunday, April 23, at Del Monte, and that the Monday and Thursday meetings be held in the morning, and the Tuesday and Wednesday meetings in the afternoons at 2:30.

14. Senate Bill 953.—Dr. Rodney Yoell presented various literature and newspaper clippings demonstrating his contention that a bill regulating hospital associations as contemplated by Senate Bill 953 was timely. Doctor Yoell stated that the Association's main objection to the bill, as he understood it, was that the bill would legalize the practice of medicine by corporations. Doctor Yoell stated that the proponents of the bill were perfectly willing and requested the Council to authorize Mr. Peart to rewrite the first two or three paragraphs of the bill so that it would meet with the viewpoints of the Association. The danger of attempting to amend a bill sponsored by laymen and over which the Association had no control and the possibility of later amendments being added to the bill which would be detrimental to the medical profession were discussed.

Doctor Yoell stated that the bill as proposed by him defined medical practice and gave the medical profession a legal status in law.

The Council then discussed the bill.

It was the sense of the Council that the Association should oppose all bills which deal with, authorize or provide for the legalizing of the practice of medicine by corporations.

Mr. Peart then read a memorandum prepared by him for the regulation of hospital service corporations or associations furnishing hospital service only, stating that it might be desirable to include these regulations in a bill. Mr. Peart then read a set of principles covering hospital associations.

Action by the Council.—On motion of Pallette, seconded by Ullmann and unanimously carried, the following resolution was adopted:

Resolved, That the Council is opposed to Senate Bill 953 or any bill that includes medical service with hospital service and that the General Counsel write Doctor Yoell to that effect.

15.* (See footnote.)

16. Woman's Auxiliary.—A letter was presented from the Woman's Auxiliary asking that the Association donate \$150 for the entertainment of guests at the annual session at Del Monte.

Action by the Council.—On motion of Pallette, seconded by Gibbons and unanimously carried, the following resolution was adopted.

Resolved, That the request of the Woman's Auxiliary be granted and \$150 be donated for the entertainment of guests at the annual session at Del Monte.

17. Advertising Rates.—A letter was presented regarding the reduction of advertising rates in CALIFORNIA AND WESTERN MEDICINE. The secretary was instructed to reply to the letter.

18. Complimentary Copies of Journal.—A letter requesting complimentary copies of the JOURNAL for certain libraries in Texas was read.

Action by the Council.—On motion of Gibbons, seconded by Pallette and unanimously carried, the following resolution was adopted:

Resolved, That the secretary reply to the letter, stating that we are unable to comply with the request at the present time.

19. Interpretation of X-Rays.—The General Counsel stated that the Executive Committee had authorized him to prepare and file an *amicus curiae* brief in the case of Reynolds vs. Doctor Struble.

Action by the Council.—On motion of Ullmann, seconded by King and unanimously carried, the following resolution was adopted:

Resolved, That the Council approve the action of the Executive Committee.

20. Expenditures of Association.—Doctor Roblee suggested that a survey of the financial affairs of the Association be made and that a report be submitted to the Council.

Action by the Council.—On motion of Hunter, seconded by Reinle and unanimously carried, the following resolution was adopted:

Resolved, That a committee consisting of five members of the Association be appointed by the president to survey the financial affairs of the Association, three to be members of the Council, and two to be chosen from the society at large, neither of whom shall be members of the Cancer Commission nor the Department of Public Relations.

21. Legislative Assistant.

Action by the Council.—On motion of Pallette, seconded by DeLappe and unanimously carried, the following resolution was adopted:

Resolved, That the chairman of the Legislative Committee be allowed \$200 per month for the employment of a clerical assistant.

22. Illness of Doctor Hamlin.—It was the sense of the Council that Doctor Kelly be authorized to send a telegram to Doctor Hamlin expressing the sympathy of the Council in his illness and the hope for his speedy recovery.

23. Legislation.—A list of the bills of interest to the medical profession was submitted. Doctor Harris stated that the bills had been gone over by the legislative committees in the North and in the South, and asked if the Council desired to review all bills again or would it accept the recommendation of the two committees and consider only those bills of special interest and those bills which had been referred to the Council.

* Note.—Minutes 15 refer to matters still under consideration by the Council. Publication will be made in due time by Council secretary.

It was the sense of the Council that the recommendations of the northern and southern committees be accepted and the Council proceed to make recommendations on the special list.

SENATE BILLS

Senate Bill 160 (Seawell). Unlawful for hospital associations to operate without license from insurance commissioner (companion, Assembly Bill 695).

Senate Bill 547 (Allen et al.). Repeals Narcotic Rehabilitation Act and abolishes Spadra. Oppose.

Senate Bill 552 (Fellom). Adds section to Political Code relating to state psychiatrists; establishes division of psychiatry in Department of Institutions. Oppose.

Senate Bill 610 (Bush et al.). Amends Section 5, Medical Practice Act. Abolishes per diem of Board of Medical Examiners. Oppose.

On motion of Kress, seconded by Pallette and unanimously carried, the following resolution was adopted:

Whereas, The state examining boards which are under the Department of Professional and Vocational Standards are self-supporting boards maintained through license fees received from citizens who also pay all usual real and personal taxes; and

Whereas, The object of such licensing boards is the protection of the people from improperly qualified persons who would otherwise attempt to practice such professions or vocations; and

Whereas, The members of such licensing boards although receiving no salaries, are called upon to give much time and service to the state, to the detriment of their individual personal interests; and

Whereas, It has been proposed to cut off the nominal per diem fee for days when in actual attendance at board meetings, their per diems being paid, not from general tax funds of the state, but from the special license fee funds of each board; now therefore be it

Resolved, That the California Medical Association through its Council believes such action would be detrimental to the best interests of the people of the state and to the professional and vocational interests involved; be it further

Resolved, That we instruct our representatives to communicate this viewpoint to the legislative and administrative authorities of California.

Senate Bill 674 (Fellom). Antivivisection Bill. Oppose.

Senate Bill 724 (Inman). Care of indigent, incompetent, and incapacitated. No action.

Senate Bill 782 (Mixer). Duties of Boards of Supervisors. Oppose vigorously.

Senate Bill 849 (Jones). Reduces tuberculosis allotment from \$3 to \$2 per week. No action.

Senate Bill 1010 (Allen et al.). Repeals Narcotic Enforcement Act. Transfers to Pharmacy Board. Bill O. K. No action required.

ASSEMBLY BILLS

Assembly Bill 166 (Cronin). Amends Political Code re release of defendant committed to institutions for insane. Approve.

Assembly Bill 167 (Cronin). Amends Political Code re release of persons committed and insane and incompetent. Approve.

Assembly Bill 172 (Woolwine). Adds new section to Cosmetology Act. Oppose.

Assembly Bill 211 (Lyon). New Act to provide for sterilization selected inmates of state institutions. Oppose.

Assembly Bill 245 (Crowley). Amends Narcotic Rehabilitation Act re addicts. Approve.

Assembly Bill 273 (Mayo). Amends tuberculosis laws. Requires practicing physician supervision in tuberculosis hospitals. Oppose.

Assembly Bill 288 (Grubbs). Amends Workmen's Compensation Act classifying registered nurses as employees of hospitals. No action.

Assembly Bill 313 (Hornblower). Amends Medical Practice Act re license to practice chiropody. Oppose.

Assembly Bill 317 (Cronin). Amends Narcotic Law. Oppose.

Assembly Bill 318 (Cronin). Amends Narcotic Act. Permits nurses to obtain and osteopaths to prescribe narcotics, etc. Vigorously oppose.

Assembly Bill 349 (Boyle). Repeals Narcotic Enforcement. Transfers function to Board of Pharmacy. No action.

Assembly Bill 539 (Lyon). Amends Political Code relating to persons mentally disordered. Approve.

Assembly Bills 557, 558, 559 (Cronin et al.). Amends Civil Code relating to injunction for unlawful practice. Vigorously support.

Assembly Bill 565 (Fisher). Provides voluntary sterilization of persons not in state institutions. Approve.

Assembly Bill 647 (Mayo). Amends Workmen's Compensation Act. Limits amount of compensation to be paid. Oppose.

Assembly Bills 648, 649, 650, 651 (Mayo). Amends Workmen's Compensation Act. Bill O. K., but no action by the California Medical Association.

Assembly Bill 695 (Robinson). Companion bill, Senate Bill 160. Unlawful to engage in medical service without license from Insurance Commission. Oppose.

Assembly Bill 784 (Rose). Amends Itinerant Drug Venders' Act. Reduces fees. Oppose.

Assembly Bill 795 (Craig). X-Ray Technicians' Bill. Oppose vigorously.

Assembly Bill 827 (McBride). Amends Political Code relating to state institutions for mentally defective. Oppose vigorously.

Assembly Bill 900 (Rawls). Amends Workmen's Compensation Act. Permits chiropractors to care for injured. Oppose vigorously.

Assembly Bill 904 (Mayo). Amends Political Code relating to Industrial Accident Commission. Members to serve at pleasure of Governor. Oppose.

Assembly Bill 982 (Roberts). Amends dental laws. Oppose.

Assembly Bill 983 (Roberts). Amends dental laws. Oppose.

Assembly Bill 984 (Roberts). Amends Dental Laws. Approved. To help dentists.

Assembly Bill 985 (Roberts). Amends dental law. Approved. To help dentists.

Assembly Bill 986 (Crist). Provides impartial witnesses from Civil Service panel. Approve.

Assembly Bill 987 (Crist). New law relating to medical examinations and expert testimony. Approve.

Assembly Bill 1027 (Mayo). Amends Workmen's Compensation Act relating to findings and awards. Vigorously oppose.

Assembly Bill 1029 (Mayo). Workmen's Compensation Act. Relating to medical examinations of employees. No action.

Assembly Bill 1034 (Boyle). Care of indigent tuberculous persons. Oppose vigorously.

Assembly Bill 1074 (Hornblower). Health insurance on assessment plan. No action.

Assembly Bill 1149 (Williamson). New Bird Inspection Law. No action.

Assembly Bill 1159 (Gilmore). Creates Naturopathic Association of California. Oppose vigorously.

Assembly Bill 1168 (Morgan). Amends Workmen's Compensation Act relating to aggravation of disease prior to injury. No action.

Assembly Bill 1277 (Nielsen). Clinic Bill. Support.

Assembly Bill 1306 (Dempster). Establishes state board of naturopathic examiners. Oppose.

Assembly Bill 1322 (Boyle). Amends Indigent Act relating to old age relief. No action.

Assembly Bills 1340, 1341, 1342 (Williamson). Food laws. Board of Health amending to be acceptable. No action.

Assembly Bill 1461 (O'Connor). New law regarding ingredients of cosmetics. No action.

Assembly Bill 1487 (Cronin). Establishes California Psychiatric Institute. No action.

Assembly Bill 1727 (Jones). New section to Indigeneity Act. Mr. Peart to examine. Definition of indigeneity. Confer with committee and work on bill.

Assembly Bill No. 1740 (Maloney). Places chiropractors in all state institutions and prisons. Oppose.

Assembly Bill 1743 (Dempster). Amends Political Code re indigents. Oppose.

Assembly Bill 1777 (Fisher). Amends Political Code re county hospitals. Skeleton.

Assembly Bill 1778 (Fisher). Provides aid for indigents. Skeleton.

Assembly Bill 1779 (Fisher). Authorizes administration of relief to county welfare agencies. Skeleton.

Assembly Bill 1780 (Fisher). Amends Indigeneity Act. Skeleton.

Assembly Bill 1813 (O'Connor). Abolishes Department of Professional and Vocational Standards. Places medical examiners and others under Department of Health. Oppose.

Assembly Bill 1830 (Field). Amends Rabies Act relating to diseased birds and animals. Oppose. Bad bill.

Assembly Bill 1849 (Frazier). Repeals law supporting children in preventoria. Oppose.

Assembly Bill 1924 (Gilmore). New section to Medical Practice Act. Only physicians may retail physical deformity correction appliances. Violently oppose.

Assembly Bill 2157 (Dempster). Permits owners of small shops to maintain families on premises. Support.

Assembly Bill 2190 (Bliss). Admits pay patients to county hospitals. Oppose vigorously.

Assembly Bill 2246 (Robinson and Ray). Makes available buildings at Spadra for feeble-minded children. In case Spadra is closed for narcotics, support.

Assembly Bill 2250 (Cobb). Repeals United States Pharmacy appropriation made at last legislature. Oppose.

On motion of Kress, duly seconded and unanimously carried, the following resolution was adopted:

Whereas, The various professional and vocational examining boards receive their maintenance fees to carry on their work, not from the general tax funds of the state, but from special license and similar fees levied on the members of such professions and vocations, although such citizens also pay the regulation real and personal taxes of the state; and

Whereas, These fees so received very properly have been placed in special funds to the credit of the respective boards; and

Whereas, It is proposed to transfer balances in some of such special board funds to the general fund of the state; and

Whereas, Such action would be an expression of possible illegal special taxation, since it would subject certain citizens not only to real and personal taxation, but to special taxation; now therefore be it

Resolved, By the California Medical Association, through its Council, that, because of the above facts, this Association oppose on principle the transfer of balances in such special license and maintenance funds of such professional and vocational boards to the general funds of the state; and be it further

Resolved, That this action be respectfully called to the proper legislative and administrative authorities of the state.

CONSTITUTIONAL AMENDMENTS

No. 4 (Maloney). Amends Article 4, adds new section relating to practice of chiropractic. See Assembly Bill 18, page 3.

No. 39 (Latham). Exemption of nurses from taxation. No action.

24. Adjournment.—There being no further business the meeting adjourned.

T. HENSHAW KELLY, *Acting Chairman*.
EMMA W. POPE, *Secretary*.

Minutes of the Two Hundred and Fourteenth Meeting of the Council of the California Medical Association

The following minutes were approved by the Council at its two hundred and fifteenth meeting, held at Hotel Del Monte, Del Monte, on April 24, 1933.

Held in Room 723, Hotel Del Monte, Del Monte, California, Sunday, April 23, 1933, at 8 p. m.

Present.—Doctors Joseph M. King, president; George G. Reinle, president-elect; Edward M. Palette, Speaker; T. Henshaw Kelly, chairman Executive Committee; and Councilors W. W. Roblee, William Duffield, H. J. Ullmann, A. L. Phillips; R. A. Peers, H. A. Rogers, G. G. Hunter, H. E. Zaiser, W. H. Kiger, M. R. Gibbons, T. H. Kelly, J. B. Harris; and Emma W. Pope, secretary, George H. Kress, editor; W. M. Dickie, director of Public Relations; and Mr. Hartley F. Peart, general counsel.

Absent.—Doctors O. D. Hamlin, chairman of Council, on account of illness, and Councilors Karl L. Schaupp and F. R. DeLappe.

1. Call to Order.—The meeting was called to order by the vice-chairman, T. Henshaw Kelly.

Action by the Council.—On motion of Phillips, seconded by Reinle and unanimously carried, the following resolution was adopted:

Resolved, That a telegram be sent O. D. Hamlin expressing the sympathy of the Council on his illness and its regret of his absence from the sixty-second annual session, the first session from which he has been absent in many years.

2. Report of the Council.—T. Henshaw Kelly presented the report of the Council, which was read and acted on section by section.

The report of the Committee on Clinical and Research Prizes was presented and the recommendations contained therein were approved for inclusion in the report of the Council for submission to the House of Delegates. It was felt that a statement on the excellence of the papers should be included.

Doctor Kelly stated that any necessary additions would be made to the paragraph on the Committee on Physical Therapy after the submission of the committee's report tomorrow.

Discussion was had of the inclusion of a section on medical service plans.

Action by the Council.—On motion of Ullmann, seconded by Palette and unanimously carried, the following resolution was adopted:

Resolved, That a committee of three be appointed to report at the Monday meeting of the Council on a paragraph for inclusion in the report of the Council on medical service plans.

The questions of modification of the ruling on medical service plans, necessitating approval by two-thirds of all county society members and the allocation of the expense of formulation of plans, were discussed.

The chairman appointed as members of the committee, Doctors Reinle, Gibbons, Dukes, and Mr. Peart.

3. Report of the Secretary.—The report of the secretary, as published in the *Pre-Convention Bulletin*, was presented, and on motion of Ullmann, seconded by Palette, the report was approved.

4. Report of the Editor.—The editor stated that in addition to the report of the editor published in the *Pre-Convention Bulletin*, which was a report on statistical information on the JOURNAL, he wished to submit a short general report.

Doctor Kress then read the report on additional information.

Action by the Council.—On motion of Hunter, seconded by Gibbons and unanimously carried, the report of the editor was approved and it was agreed that the supplemental report on general information should be read to the members of the House of Delegates.

5. Report of the Auditing Committee.—The report of the Auditing Committee, as published in the JOURNAL, was presented.

Action by the Council.—On motion of Ullmann, seconded by Pallette, the report of the Auditing Committee was approved.

6. Report of the Committee on Public Relations.—Dr. C. A. Dukes, chairman of the Committee on Public Relations, presented the report of the Committee on Public Relations.

Action by the Council.—On motion of Gibbons, seconded by Reinle and unanimously carried, the report of the Committee on Public Relations was accepted.

It was the sense of the Council that Doctor Dukes present a short report to the House of Delegates.

7. Report of the Legal Department.—The general counsel presented the report of the legal department. Mr. Peart then read a detailed report on the matter of the corporate practice of medicine.

It was the sense of the Council that this report be briefly summarized for presentation to the House of Delegates.

Full discussion was then had of the proposed bill governing county hospitals, Senate Bill No. 2190. It was agreed that the general counsel should present a brief explanation of the bill to the House of Delegates. Mr. Peart stated that he would also report briefly on the decision of the Supreme Court on the interpretation of x-rays and the legal aspect of medical and hospital service.

8. Report of the Trustees Of The California Medical Association.—The report of the Trustees Of The California Medical Association was presented by the acting chairman, and was approved as presented.

9. Cancer Commission.—The report of the Cancer Commission, as published in the *Pre-Convention Bulletin*, was approved.

10. Committee on Public Policy and Legislation.—The report of the Committee on Public Policy and Legislation, as published in the *Pre-Convention Bulletin*, was approved. It was the sense of the Council that a short report by the chairman of the committee should be included in the program of the first meeting of the House of Delegates.

11. Miscellaneous Reports.—It was the sense of the Council that the various miscellaneous reports not already acted upon be approved as published in the *Pre-Convention Bulletin*.

12. Report of the Committee on Survey of Expenditures of the Association.—Dr. William Roblee, chairman of the Committee on Survey of Expenditures, presented the report of his committee, which contemplated an annual saving of approximately \$9,000, suggested to provide for the contemplated reduction of dues. It was agreed that the allocation to the JOURNAL should read \$2 per member. Details of the report were explained by Doctor Roblee and discussed by the Council.

Action by the Council.—On motion of Hunter, seconded by Duffield and unanimously carried, the following resolution was adopted:

Resolved, That the report of the Committee on Survey of Expenditures of the Association be approved and that it be presented to the House of Delegates by Doctor Roblee.

13. Health Officers.—The secretary read a resolution adopted by the Council wherein it was suggested that the matter of activities of health officers be considered by the House of Delegates.

After discussion, on motion of Harris, seconded by Peers and unanimously carried, the following resolution was adopted:

Resolved, That the previous action of the Council recommending discussion by the House of Delegates be rescinded.

14. Program of House of Delegates.—The chairman read the program of the first two meetings of the House of Delegates.

It was the sense of the Council that the program of the first meeting be amended to include a report by the chairman of the Committee on Public Policy and Legislation.

Action by the Council.—On motion of Reinle, seconded by Rogers and unanimously carried, the following resolution was adopted:

Resolved, That the program for the first two meetings of the House of Delegates be approved as amended.

15. Medical Problems Group.—A letter was read from the Medical Problems Group, San Francisco, requesting that a fund be established to carry on a campaign to create sentiment favorable to the medical profession.

Action by the Council.—On motion of Ullmann, seconded by Rogers and unanimously carried, the following resolution was adopted:

Resolved, That the letter be referred to the Committee on Public Relations and that the Medical Problems Group be so notified, and their attention called to the report of the Committee on Survey of Expenditures.

16. Annual Dues.—Full discussion was had of the annual dues of the Association, and on motion of Peers, seconded by Ullmann and unanimously carried, the following resolution was adopted:

Resolved, That the Council present the matter of annual dues of the Association to the House of Delegates without recommendation.

17. Adjournment.—There being no further business the meeting adjourned.

T. HENSHAW KELLY, *Acting Chairman.*
EMMA W. POPE, *Secretary.*

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Minutes of the Two Hundred and Fifteenth Meeting of the Council of the California Medical Association

The following minutes were approved by the Council at its seventeenth meeting, held at Del Monte, California, April 26, 1933.

Held in Room 723, Hotel Del Monte, Del Monte, California, Monday, April 24, 1933, at 2:30 p. m.

Present.—Doctors Joseph M. King, president; George G. Reinle, president-elect; Edward M. Pallette, Speaker; T. Henshaw Kelly, chairman of Executive Committee; Councilors W. W. Roblee, William Duffield, H. J. Ullmann, F. R. DeLappe, A. L. Phillips, R. A. Peers, H. A. Rogers, G. G. Hunter, H. E. Zaiser, W. H. Kiger, M. R. Gibbons, J. B. Harris; Emma W. Pope, secretary-treasurer; George H. Kress, editor; and Hartley F. Peart.

Absent.—Doctors O. D. Hamlin, chairman of the Council, on account of illness, and Karl L. Schaupp.

1. Call to Order.—The meeting was called to order by the vice-chairman, T. Henshaw Kelly.

2. Committee on Physical Therapy.—John Severy Hibben, chairman of the Special Committee on Physical Therapy, presented the report of his committee. Doctor Hibben submitted data which had been collected through questionnaires sent to the teaching universities, county medical societies, and various hospitals in the state.

Action by the Council.—On motion of Gibbons, seconded by Reinle and unanimously carried, the following resolution was adopted:

Resolved, That the report of the committee be accepted and the committee continued.

The secretary presented a bill from Doctor Hibben for \$77.92, covering clerical and stenographic work in compiling his report.

Action by the Council.—On motion of Peers, seconded by Phillips and unanimously carried, the following resolution was adopted:

Resolved, That the bill be paid.

3. Minutes of the Council.—The acting chairman stated that the minutes of the two hundred and thirtieth meeting of the Council had been mailed to all councilors and if there were no objections no further reading would be had. The minutes of the two hundred and fourteenth meeting of the Council were read by the secretary.

Action by the Council.—On motion of Reinle, seconded by Hunter, and unanimously carried, the following resolution was adopted:

Resolved, That the minutes of the two hundred and thirteenth and two hundred and fourteenth meetings of the Council be approved.

It was the sense of the Council that the minutes of the annual session be sent forward each day to the printer for publication in the May issue of the JOURNAL.

4. Next Annual Session.—Doctors Ferris and Van Zwalenburg of Riverside personally presented the invitation of the Riverside County Medical Association for the holding of the next annual session at Riverside.

It was the sense of the Council that the place of the next annual session be considered at the Wednesday meeting of the Council.

5. Officers' Luncheon.—The secretary announced the time and place of the officers' luncheon and the tentative program of the meeting.

6. Standing Committees.—Dr. William Duffield, member of the special committee on Nominees for Standing Committees, presented the recommendations of his committee.

Action by the Council.—On motion of King, seconded by Gibbons and unanimously carried, the following resolution was adopted:

Resolved, That the matter of nominees for standing committees be considered at the Wednesday meeting of the Council.

7. Report on Advertising.—The secretary presented a report on advertising in CALIFORNIA AND WESTERN MEDICINE, stating that the total income from advertising for 1932 was \$25,792.74 as compared with \$33,561.19, a difference of \$7,768.45; that the December, 1932, JOURNAL carried forty-two pages of advertising as compared with fifty pages in 1931.

Discussion was then had of advertising in Southern California.

Action by the Council.—On motion of Duffield, seconded by Gibbons and unanimously carried, the following resolution was adopted:

Resolved, That that certain agreement dated May 31, 1933, made and entered into in duplicate between California Medical Association and A. A. Butterworth be and the same is hereby terminated in accordance with the provisions of paragraph 8 of said agreement, and that the secretary-treasurer be and is hereby authorized, empowered, and directed to serve notice in writing of such termination upon Mr. A. A. Butterworth forthwith.

8. X-Ray Fee Schedule.—Morton R. Gibbons, member of the Committee on Industrial Practice, presented a report on x-ray fee schedules for industrial accident work and insurance companies.

It was suggested that Doctor Gibbons discuss the schedule with representative members of the Section on Radiology.

Action by the Council.—On motion of Kress, seconded by Phillips and unanimously carried, the following resolution was adopted:

Resolved, That the report on fee schedules be accepted for presentation to the House of Delegates.

9. County Hospitals.—Mr. Peart reported on the county hospital situation.

Discussion was then had of the definition of indigency and pending legislation covering the admission of patients to county hospitals.

Action by the Council.—On motion of King, seconded by Reinle and unanimously carried, the following resolution was adopted:

Resolved, That the county hospital legislation be left to the discretion of the Committee on Public Policy and Legislation.

10. Kern County.—Doctor King stated that in appointing an arbitrator for the Kern County situation, he had been designated by name instead of by office, and that upon termination of his office he wished to be excused from the duty. It was the sense of the Council that Doctor King's wishes be granted.

11. Date of Delinquency.—Letters were read from the Los Angeles County Society requesting that the California Medical Association and the American Medical Association grant an extension of one month's time in the period of delinquency.

It was the sense of the Council that since delinquency was fixed by constitutional provision, the matter was not within its jurisdiction.

12. Membership.—A request from the Yolo-Colusa-Glenn County Society for the granting of retired membership to Walter E. Bates was presented.

Action by the Council.—On motion duly made, seconded and carried, the following resolution was adopted:

Resolved, That Walter E. Bates, member of the Yolo-Colusa-Glenn County Medical Society be granted retired membership in the California Medical Association.

Requests from the San Francisco County Medical Society for the granting of retired membership to Julian Waller, San Francisco, and Frank P. Gray, San Francisco, were presented.

Action by the Council.—On motion of Phillips, seconded by DeLappe and unanimously carried, the following resolution was adopted:

Resolved, That Frank P. Gray, San Francisco, and Julian Waller, San Francisco, members of the San Francisco County Medical Association, be granted retired membership in the California Medical Association.

13. Financial Statements.—The secretary presented the financial statements for the months of February and March, 1933, which showed a cash balance of \$54,267.30 and \$61,988.90, respectively.

It was the sense of the Council that the statements be approved as presented.

14. Lease for Association Office.—A letter from the Four-Fifty Sutter Company was presented providing for a reduction of rent based on a five-year lease and a 20 per cent reduction for the first three years, 10 per cent for the fourth year, and 5 per cent for the fifth year of the present rental.

Action by the Council.—On motion of Pallette, seconded by Gibbons and unanimously carried, the following resolution was adopted:

Resolved, That no action be taken at this time.

15. Subscriptions to the Journal.—A letter from a member of the Association asking if a group of several doctors could pay a group subscription to CALIFORNIA AND WESTERN MEDICINE and receive a refund on Association dues was read.

It was the sense of the Council that such action was not permissible since the JOURNAL is one of the gratuities of membership in the Association and no subscription price is charged to members.

16. Maternal Mortality.—A letter was presented from Ellen Stadtmuller, Child Welfare Bureau, regarding the possibilities of publication of a report of the Maternal Mortality in California in 1928 prepared by the United States Children's Bureau.

Action by the Council.—On motion of King, seconded by Phillips and unanimously carried, the following resolution was adopted:

Resolved, That the letter be referred to the obstetricians of the Council with power to act.

17. Medical Service Plans.—The report of the Special Committee appointed to formulate a provision covering approval by county society members of any medical service plan.

Full discussion was had of the difficulties experienced in the larger counties in securing a two-thirds vote of the members.

It was the sense of the Council that the matter of Principles for Medical Service plans be discussed in full at the Wednesday Council meeting.

Discussion was then had of the allocation of expense entailed in the formulation of plans for medical service. It was pointed out that once the basic details and necessary documents for any medical service or hospital plan were prepared, they could be adopted with slight revision by any county medical society. It was felt that recommendations on basic details and documents should come from the Department of Public Relations to the Council.

After full consideration, the Special Committee was instructed to revamp its resolution on forms, basic

principles and expense of medical service plans and present the matter for discussion at the Wednesday meeting.

18. Amendments to Constitution.—The General Counsel presented amendments to the by-laws, made necessary by the proposed amendments to the constitution, the resolution presented at the last annual session providing for a Committee on Public Relations.

It was the sense of the Council that the amendments proposed by the General Counsel be presented at the first meeting of the House of Delegates.

19. Corporate Practice.—Resolutions deploring the practice of medicine by hospitals, lay individuals, groups and corporations for profit, were presented from the Sections on Anesthesiology, Bacteriology, Pathology, and Radiology.

It was the sense of the Council that the resolution be included in the report of the Council for presentation at the first meeting of the House of Delegates.

20. Senate Bill 674.—Senate Bill 674, regulating the disposition of animals, was discussed, and on motion of Gibbons, seconded by Ullmann and unanimously carried, the following resolution was adopted:

Resolved, That Doctor Kress prepare a resolution embodying the opposition of the Association to Senate Bill 674, for presentation at the first meeting of the House of Delegates.

21. Adjournment.—There being no further business, the meeting adjourned.

T. HENSHAW KELLY, *Acting Chairman.*
EMMA W. POPE, *Secretary.*

Minutes of the Two Hundred and Sixteenth Meeting of the Council of the California Medical Association

The following minutes were approved by the Council at its two hundred and seventeenth meeting, held at Del Monte, California, April 27, 1933.

Held in Room 723, Hotel Del Monte, Del Monte, California, Tuesday, April 25, 1933, at 2:30 p. m.

Present.—Doctors Joseph M. King, president; George G. Reinle, president-elect; Edward M. Pallette, Speaker; T. Henshaw Kelly, chairman Executive Committee; Councilors W. W. Roblee, William Duffield, H. J. Ullmann, Fred R. DeLappe, A. L. Phillips, K. L. Schaupp, R. A. Peers, H. A. Rogers, G. G. Hunter, H. E. Zaiser, W. H. Kiger, M. R. Gibbons; Secretary Emma W. Pope, Editor George H. Kress, Director W. M. Dickie, and General Counsel Peart.

Absent.—Doctors O. D. Hamlin, chairman of Council, on account of illness; and J. B. Harris, on Association business.

1. Call to Order.—The meeting was called to order by the acting chairman, T. Henshaw Kelly.

2. Adjournment.—There being no business demanding immediate action, adjournment was taken until Wednesday at 2:30 p. m.

T. HENSHAW KELLY, *Acting Chairman.*
EMMA W. POPE, *Secretary.*

Minutes of the Two Hundred and Seventeenth Meeting of the Council of the California Medical Association

The following minutes were approved by the Council at its two hundred and eighteenth meeting, held at Del Monte, California, April 27, 1933.

Held in Room 723, Hotel Del Monte, Del Monte, California, Wednesday, April 26, 1933, at 2:30 p. m.

Present.—Doctors Joseph M. King, president; George G. Reinle, president-elect; Edward M. Pallette, Speaker; T. Henshaw Kelly, chairman Executive Committee; Councilors W. W. Roblee, William Duffield, H. J. Ullmann, Fred R. DeLappe, A. L. Phillips, K. L. Schaupp, R. A. Peers, H. A. Rogers, G. G. Hunter, H. E. Zaiser, W. H. Kiger, M. R. Gibbons; Secretary Emma W. Pope, Editor George H. Kress, Director W. M. Dickie, and General Counsel Peart.

Absent.—Doctors O. D. Hamlin, chairman of Council, on account of illness; and J. B. Harris, on Association business.

1. Call to Order.—The meeting was called to order by the acting chairman, T. Henshaw Kelly.

2. Minutes of the Council.—Minutes of the two hundred and fifteenth and two hundred and sixteenth meetings of the Council were read by the secretary.

Action by the Council.—On motion of Ullmann, seconded by Rogers and unanimously carried, the following resolution was adopted:

Resolved, That the minutes of the two hundred and fifteenth and two hundred and sixteenth meetings of the Council be approved as read.

3. Medical Service Principles.—The special committee appointed to study and revise the Principles for Medical Service presented its recommendations for consideration.

Principle No. 2 of the Principles for Medical Service was discussed and was amended to read as follows: "Medical and hospital service shall be considered separately from indemnity for disability."

Principle No. 5, reading: "Professional service under any plan adopted shall be limited to the membership of a component county medical society or groups thereof endorsed through its official organization by a two-third's majority of all its members" was discussed in detail.

Action by the Council.—On motion of Pallette, seconded by Ullmann and unanimously carried, the following resolution was adopted:

Resolved, That Principle No. 5 be changed to read: "Professional service under any plan adopted shall be limited to the membership of a component county society or groups thereof, and no plan for medical and/or hospital service shall be recognized until it has received the endorsement of the Council after its approval by (1) the affirmative vote of two-thirds of the members of such society provided in the case of a county society having a membership of 450 or over, the affirmative vote of two-thirds of the members voting, provided that a majority of all the members vote, shall be sufficient for approval; and (2) the Committee on Public Relations.

"The vote of the membership of the component county society herein provided for shall be had at a meeting of the members or by mail only after due written notice of the details of the proposed plan and time and place of the meeting or vote shall have been given to all members.

"Upon the approval of any plan by such vote the secretary of the component county society shall transmit the plan with full details and the result of the vote of the approval thereon to the secretary of the Association, who shall refer the matter to the Committee on Public Relations for its consideration and action. The Committee on Public Relations shall report its action thereon to the Council.

"The endorsement of the Committee on Public Relations and the approval of the Council in considering any plan shall take into consideration established ethics and the provisions of the Medical Practice Act."

Plan (d) recommendation II reading: "A plan for rendering both medical and surgical service by such medical service firm and hospital service by an organization controlled and operated by a hospital" was discussed.

Action by the Council.—On motion duly made, seconded and unanimously carried, the following resolution was adopted:

Resolved, That after due consideration of the development of hospital and medical service plans since the adoption of the types of service by resolution adopted September 24, 1932, that type "D" shall be referred to the Committee on Public Relations for study and further recommendation to the Council.

Further discussion was had of the formulation and expense entailed in the development of detailed structure and legal instruments to inaugurate medical and hospital service plans.

Action by the Council.—On motion of Hunter, seconded by Palette and unanimously carried, the following resolution was adopted:

Whereas, The development of the detailed structure and legal instruments necessary to inaugurate medical and/or hospital service plans is a part of the Association's program undertaken on the recommendation of the Committee on Public Relations, and such detail and instruments will be applicable to all component county societies desiring to avail themselves thereof; now, therefore, be it

Resolved, That the reasonable expense entailed by this development shall be paid by the Association in and at the discretion of the Council.

4. **Next Annual Session.**—Invitations for the 1934 annual session were presented from Yosemite, San Francisco, Oakland, Long Beach, Pasadena and Riverside, and full discussion of the desirability of the various localities was had.

A ballot was then taken and Riverside, having received the majority of the votes cast, was declared the place of the 1934 annual session.

5. **Standing Committees.**—The report of the Special Committee on Nominees for Standing Committees was presented by Doctor Schaupp and discussed by the Council.

Resignations were accepted from Lyell C. Kinney, Committee on Medical Economics; Daniel Crosby, Committee on Industrial Practice; and William Duffield, Committee on Public Policy and Legislation.

The membership of the standing committees was then discussed in detail and on nominations duly made and seconded, elections were had to fill all vacancies on standing committees, and the following membership was approved for presentation to the House of Delegates:

Committee on Associated Societies and Technical Groups.

R. Manning Clarke, chairman.....	Los Angeles	1934
Clifford Sweet.....	Oakland	1935
William H. Geistweit.....	San Diego	1936

Committee on Extension Lectures.

Robert T. Legge, chairman.....	Berkeley	1934
James F. Churchill.....	San Diego	1935
J. Homer Woolsey.....	San Francisco	1936
Secretary ex officio.		

Committee on Health and Public Instruction.

Langley Porter.....	San Francisco	1934
Fred B. Clarke, chairman.....	Long Beach	1935
W. R. P. Clark.....	San Francisco	1936

Committee on History and Obituaries.

George D. Lyman.....	San Francisco	1934
Charles D. Ball, chairman.....	Santa Ana	1935
J. Marion Read.....	San Francisco	1936
Secretary ex officio.		
Editor ex officio.		

Committee on Hospitals, Dispensaries and Clinics.

Karl Schaupp.....	San Francisco	1934
John C. Ruddock.....	Los Angeles	1935
Daniel Crosby, chairman.....	Oakland	1936

Committee on Industrial Practice.

Harry E. Zaiser.....	Orange	1934
Morton R. Gibbons, chairman.....	San Francisco	1935
Mott H. Arnold.....	San Diego	1936

Committee on Medical Defense.

Henry Snure, chairman.....	Los Angeles	1934
George G. Reinle.....	Oakland	1935
Fred R. DeLappe.....	Modesto	1936

Committee on Medical Economics.

Willard Stone.....	Pasadena	1934
John H. Graves, chairman.....	San Francisco	1935
William R. Molony, Sr.....	Los Angeles	1936

Committee on Medical Education and Medical Institutions.

H. A. L. Ryfkogel.....	San Francisco	1934
George Dock, chairman.....	Pasadena	1935
George G. Hunter.....	Los Angeles	1936

Committee on Membership and Organization.

LeRoy Brooks.....	San Francisco	1934
Harry H. Wilson, chairman.....	Los Angeles	1935
Dewey R. Powell.....	Stockton	1936
Secretary ex officio.		

Committee on Publications.

Percy T. Magan, chairman.....	Los Angeles	1934
Ruggles A. Cushman.....	Talmage	1935
Frederick F. Gundrum.....	Sacramento	1936
Secretary ex officio.		
Editor ex officio.		

Committee on Scientific Work.

Lemuel P. Adams.....	Oakland	1934
J. Homer Woolsey.....	San Francisco	1935
F. M. Pottenger.....	Monrovia	1936
Hilmer, O. Koefod, Santa Barbara, secretary of Section on General Medicine, ex officio.		
Edwin M. Taylor, Oakland, secretary of Section on General Surgery, ex officio.		
Emma W. Pope, chairman, ex officio.		

Committee on Public Policy and Legislation.

E. T. Remmen.....	Glendale	1934
Junius B. Harris, chairman.....	Sacramento	1935
Fred R. DeLappe.....	Modesto	1936
President ex officio.		
President-elect ex officio.		

Special Committee on Clinical and Research Prizes.

Eugene S. Kilgore.....	San Francisco	1934
Arthur L. Bloomfield.....	San Francisco	1935
George Dock, chairman.....	Pasadena	1936

6. **Committee on Physical Therapy.**—A request from the Committee on Physical Therapy for the appointment of a specific sixth member to the committee was presented.

Action by the Council.—On motion, duly made, seconded and carried, the matter was tabled.

7. **Senate Bill 2190.**—The General Counsel presented the amendments proposed to Senate Bill 2190.

It was the sense of the Council that Mr. Peart be authorized to revise the amendments in accordance with his best judgment.

8. **Narcotics.**—A telegram was presented from the superintendent of the Narcotic Hospital at Spadra thanking the Association for its assistance in saving Spadra from abolishment.

9. **Woman's Auxiliary.**—A resolution adopted by the Woman's Auxiliary thanking the Association for its coöperation was presented. The resolution asked that full consideration be given in the future to the securing of a suitably quiet room for the meetings of the auxiliary.

10. **Senate Bill 674.**—Doctor Kress read a telegram which had been sent by Dr. Joseph M. King to the Assembly Committee on Public Health and Quarantine in accordance with a resolution adopted at the fourth general session.

11. **Advertising Agent.**—Discussion was had of advertising in Southern California.

It was the sense of the Council that Doctor Kress and the Los Angeles Councilors be authorized to contact Mr. Butterworth and endeavor to secure his consent to abrogate the six months' notice of termination clause in the contract and that they discuss the possibilities of having the advertising agent for the "Los Angeles County Medical Association Bulletin" handle advertising in Southern California for the JOURNAL.

12. **Los Angeles General Hospital.**—Discussion was had of the action of the Board of Supervisors of Los Angeles in instructing the executive superintendent of the Los Angeles Hospital to make a survey of the facilities available at the hospital for the care of veterans.

It was the sense of the Council that this was a local matter.

13. **Office Staff.**—On motion of Gibbons, seconded by Duffield and unanimously carried, it was

Resolved, that the secretary and her staff be permitted a holiday until Monday, May 1.

14. **Charters to County Societies.**—It was the sense of the Council that the District Councilors of the districts in which new county societies were authorized be delegated to present the charters and arrange for the organization meetings of the societies.

T. HENSHAW KELLY, *Acting Chairman.*
EMMA W. POPE, *Secretary.*

Minutes of the Two Hundred and Eighteenth Meeting of the Council of the California Medical Association

The following minutes were approved by the Council at its two hundred and eighteenth meeting, held at Del Monte, California, April 27, 1933.

Held in Room 723, Hotel Del Monte, Thursday, April 27, 1933, at 9 a. m.

Present.—Doctors G. G. Reinle, president; Clarence G. Toland, president-elect; E. M. Palette, Speaker; T. Henshaw Kelly, chairman of Council; Councilors W. W. Roblee, C. R. Howson, H. J. Ullmann, F. R. DeLappe, A. L. Phillips, H. A. Rogers, G. G. Hunter, W. H. Kiger, M. R. Gibbons; Editor George H. Kress, Secretary-Treasurer Emma W. Pope, and General Counsel Peart.

Absent.—Doctors O. D. Hamlin on account of illness and J. B. Harris on Association business at Sacramento, and Councilors C. O. Tanner, and E. E. Schoff.

1. **Call to Order.**—The meeting was called to order by the acting chairman, T. Henshaw Kelly.

2. **Minutes of the Council.**—Minutes of the two hundred and sixteenth and two hundred and seventeenth meetings of the Council were read by the secretary, and on motion duly made, seconded and carried, were approved as amended.

3. **Election of Chairman of Council.**—The acting chairman, T. Henshaw Kelly, stated that the first order of business was the election of a chairman of the Council for the ensuing year.

Oliver D. Hamlin was nominated by Morton R. Gibbons, seconded by George H. Kress, as chairman of the Council for the ensuing year.

RESIGNATION OF DR. O. D. HAMLIN—RESOLUTION

Doctor Reinle stated that just before he left Oakland for the meeting Doctor Hamlin had called him and requested that if his name were presented for the office of chairman of the Council, Doctor Reinle was to express to the Council Doctor Hamlin's request to be relieved of the work of this office on account of other activities.

Action by the Council.—On motion of Gibbons, seconded by DeLappe, and unanimously carried, the following resolution was adopted:

Whereas, For many years Oliver D. Hamlin has loyally and assiduously served the California Medical Association as councilor and as chairman of the Council of the Association; and

Whereas, The press of professional and personal affairs and duties has brought him to the irrevocable decision that he can no longer devote the time to the duties of chairman of the Council that his devotion to the welfare of the California Medical Association makes him feel necessary; and

Whereas, He has instructed his old friend and colleague, George Reinle, to withdraw his name from nomination as chairman of the Council for the above reasons; therefore be it

Resolved, That the Council of the California Medical Association grant his request, made by Doctor Reinle, and express its regret that he feels such a step necessary; and be it further

Resolved, That the Council express to him its thanks and appreciation of his service as chairman and its pleasure that he is to remain as a member of the Council from the seventh councilor district.

T. Henshaw Kelly was then nominated by George H. Kress, seconded by George G. Hunter. Fred R. DeLappe moved that the nominations be closed and the ballot of the Council be cast for Doctor Kelly. Such motion was seconded by George G. Reinle, and carried.

The ballot was cast and the election of T. Henshaw Kelly as chairman of the Council for the ensuing year was announced.

4. **Election of Vice-Chairman.**—Morton R. Gibbons was nominated by William H. Kiger as vice-chairman of the Council for the ensuing year; such nomination was seconded by F. R. DeLappe. George G. Hunter moved that the nominations be closed and the secretary be instructed to cast the ballot; such motion was seconded by Alfred L. Phillips, and carried.

Emma W. Pope, secretary *pro tem*, cast the ballot and T. Henshaw Kelly announced the election of Morton R. Gibbons as vice-chairman of the Council for the ensuing year.

5. Retiring Officers of Association.

Action by the Council.—On motion duly made, seconded and unanimously carried, the following resolution was made:

Whereas, Joseph M. King has completed his terms as president and president-elect and is now no longer a member of the Council; and

Whereas, During his membership in the California Medical Association he has given unswerving service to medicine in California; and

Whereas, During his years as president-elect and president, despite his health, he has served the California Medical Association with a devotion second to none; therefore be it

Resolved, That the Council express to him its regret at his absence from its future meetings this year and its thanks for and deep appreciation of his accomplishments on behalf of medicine and the California Medical Association.

Action by the Council.—On motion duly made, seconded and unanimously carried, the following resolution was made:

Whereas, The Council of the California Medical Association, as it meets to organize for the year 1933-1934, finds William Duffield of Los Angeles and Robert A. Peers of Colfax no longer members by their own will; and

Whereas, They have, by their cordial and effective cooperation, added to the enjoyment of the work of their fellow councilors and to the success of the California Medical Association; therefore be it

Resolved, That the Council express its regret that Doctor Duffield's health and Doctor Peers's other duties have made necessary their retirement from the Council and its deep appreciation of their friendship and the services that they have rendered to medicine in California and to the California Medical Association; and be it further

Resolved, That it express the hope to Doctor Duffield that he will soon recover from the illness that prompts his retirement and to Doctor Peers that he will not always be so busy that the Council may welcome them both again.

6. **Election of Secretary-Treasurer.**—Emma W. Pope was nominated by Henry J. Ullmann as secretary-treasurer for the ensuing year; such nomination was seconded by Alfred L. Phillips. George G. Hunter moved that the nominations be closed, and the chairman cast the ballot; such motion was seconded by M. R. Gibbons, and carried.

The chairman cast the ballot and announced the election of Emma W. Pope as secretary-treasurer of the Association for the ensuing year.

7. **Election of Editor.**—George H. Kress was nominated by Edward M. Palette, seconded by William Roblee, as editor of the JOURNAL for the ensuing year. George G. Reinle moved that the nominations be closed and the secretary be instructed to cast the ballot; such motion was duly seconded, and carried.

The secretary cast the ballot and the chairman announced the election of George H. Kress as editor of the JOURNAL for the ensuing year.

8. **Election of Director of the Department of Public Relations.**—It was stated that a temporary appointment should be made of a Director of the Department of Public Relations for the interim between this meeting of the Council and the time at which the recommendation of the Committee on Public Relations for the office of the Director of the department is received.

Action by the Council.—On motion of Gibbons, seconded by Palette and unanimously carried, the following resolution was adopted:

Resolved, That Walter M. Dickie be elected Director of the Department of Public Relations pending the receipt of the recommendation of the Committee on Public Relations for the office of Director of Public Relations.

9. **Appointment of General Counsel.**—On motion of Rogers, seconded by Ullmann and unanimously carried, the following resolution was adopted:

Resolved, That Hartley F. Peart be appointed general counsel for the ensuing year.

10. Appointment of Associate General Counsel.—On motion of Hunter, seconded by Gibbons and unanimously carried, the following resolution was adopted:

Resolved, That Hubert T. Morrow be appointed associate general counsel for the ensuing year.

11. Committees of Council.—The chairman stated that he wished to give thought to the membership of the committees and the work entailed before appointing the members of the Auditing Committee and the Arrangements Committee for the next annual session.

12. Cancer Commission.—The president stated that he had appointed as members of the Cancer Commission, Doctors Clarence G. Toland of Los Angeles, Harold Brunn of San Francisco, and Henry J. Ullmann of Santa Barbara. The appointments as presented were approved by the Council.

13. Date of Next Council Meeting.—Discussion was had of the date of the next meeting of the Council. It was pointed out that the members of the Trustees Of The California Medical Association, all of which were members of the Council, according to constitutional provision, would meet in San Francisco on May 27.

Action by the Council.—On motion of Gibbons, seconded by DeLappe and unanimously carried, the following resolution was adopted:

Resolved, That the next meeting of the Council be held at San Francisco on May 27, 1933.

14. Topics for Discussion at Councilor Visits to County Societies.—Discussion was had of suitable topics for discussion by councilors when visiting county societies.

The members of the Council felt that an explanation should be made to members of the work of the legal department, the Committee on Public Policy and Legislation, the work that had been done on medical service and hospital plans.

Doctor Reinle suggested that, in accordance with the recommendations of the Committee on Expenditures of the Association, a letter be sent to the county societies at frequent intervals giving an outline of the activities of the Association.

It was the sense of the Council that Doctors Kelly, Pope, and Mr. Peart be authorized to formulate a letter to be sent to councilors giving suggestions for discussions at county medical societies during councilor visits.

15. Publicity Man.—Doctor Reinle stated that at the suggestion of Doctor King he had contacted certain northern council members before the annual session regarding the advisability of having a publicity man present at the Del Monte session and that upon their approval had requested the publicity agent for the Alameda County Medical Society to be present and handle the publicity of the annual session. Doctor Reinle stated that the financial arrangement agreed upon had been the payment of \$100 and expenses.

It was the sense of the Council that the bill be paid.

Doctor Rogers pointed out the value of ethical publicity in small out-of-town newspapers in molding public opinion.

Discussion was had of the value of a publicity agent for the Association.

Action by the Council.—On motion of Ullmann, seconded by Hunter and carried, the following resolution was adopted:

Resolved, That the matter of a publicity man at a small annual salary be referred to the Committee on Public Relations for investigation and report at the next meeting of the Council.

16. Association Offices.—Consideration was had of the rent of the Association offices as referred to the Council by the House of Delegates in its consideration of the report of the Committee on Survey of Expenditures.

Doctors Howson and Roblee stated that certain economies recommended in the report had been sug-

gested to meet a possible reduction of income on account of an anticipated yearly assessment of \$8, but that in view of the fact that no reduction in dues had been made, it would be well to consider carefully the economies proposed by combination of the offices of the Association with those of the Department of Public Relations and the Cancer Commission. It was pointed out that the recommendations of the delegates and Council called for increased activity in the department.

Discussion was had of the securing of space in the building of the San Francisco County Medical Society.

It was felt that careful thought should be given before moving the Department of Public Relations, whose lease has expired, to a location too remote from the Association office, whose lease has yet fifteen months to run. It was the sense of the Council that the matter of securing smaller space for the department in the same building as the Association offices be investigated.

Action by the Council.—On motion of Ullmann, duly seconded and carried, the following resolution was adopted:

Resolved, That a committee be appointed by the chairman to study the feasibility and advisability of moving the Department of Public Relations and/or the Association offices to the building of the San Francisco County Medical Society and that a report be made to the Council.

It was stated that the report should include terms, space available, etc.

A vote was taken on the motion. Five voted in the affirmative and six voted in the negative. Motion lost.

It was the sense of the Council that one competent secretary only be employed to care for the work of the Department of Public Relations and the Cancer Commission.

17. Lane and Barlow Medical Libraries.—Discussion was had of the donations made to Lane and Barlow Medical Libraries. It was felt these donations could be continued under the present dues for the present year.

Action by the Council.—On motion of Roblee, seconded by Gibbons and unanimously carried, the following resolution was adopted:

Resolved, That the donations to Lane and Barlow Medical Libraries of 25 cents per member be continued.

18. California and Western Medicine.—Discussion was had of the advisability of reducing the size of the JOURNAL sixteen pages.

Action by the Council.—On motion of DeLappe, seconded by Roblee and unanimously carried, the following resolution was adopted:

Resolved, That on account of the necessity of publication of annual session papers and transactions of the Association the present size of the JOURNAL be continued until further action by the Council.

19. Committee on Public Policy and Legislation.—Discussion was had of expense of the Committee on Public Policy and Legislation, and it was the sense of the committee that President Reinle and Chairman Kelly be vested with authority to authorize expenditures for traveling expense, telephone calls, telegrams and accessory incidentals, in this connection.

20. Senate Bill 539.—Doctor Hunter presented a resolution which he desired sent to members of the legislature regarding Senate Bill 539. The telegram as read was approved by the Council.

21. Veterans' Hospitals.—Doctor Gibbons presented a telegram which he desired sent to the President of the United States regarding veterans' hospitals.

It was the sense of the Council that the telegram include all contemplated hospitals.

22. Minutes of the Council.—The minutes of the two hundred and eighteenth meeting of the Council were approved as read.

T. HENSHAW KELLY, *Acting Chairman.*
EMMA W. POPE, *Secretary.*

COMPONENT COUNTY MEDICAL SOCIETIES

CONTRA COSTA COUNTY

The second monthly meeting of the Contra Costa County Medical Society was held on the evening of Tuesday, February 14, at the Hotel Carquinez, Richmond, Dr. L. H. Fraser presiding.

A communication from the Public Health Association of Contra Costa County was read, remarked upon favorably by Doctor Rowell, and a motion was made by Dr. Rosa Powell, seconded by Doctor Keser, to the effect that the lung clinics be continued in this county, giving them the endorsement of the County Medical Society. The motion was passed, and the matter referred to the Committee on Public Policy, Dr. H. G. Ford, chairman, for drafting a resolution covering the matter.

The application of Dr. John Fitzgerald of Martinez was reported upon favorably by the censors and he was voted into membership.

Two exceptionally fine papers were presented by guest speakers: the first, *Sinusitis in Children*, was by Dr. Roy Nelson of Oakland. Discussion followed by Doctors Harry Ford, R. J. P. Harmon, C. R. Blake, John Beard, and closed by Doctor Nelson. The second paper was read by Dr. William Wood of Oakland on *Practical Aspects of Pediatrics as Encountered by the General Practitioner*. The discussion was by Doctors Clara H. Spalding and McCullough, and closed by Doctor Wood.

Doctor Fraser made a short report on the recent meeting held at the Claremont Country Club, Oakland, by the Napa County Medical Society, which was attended by eight members of our society. Doctor Fraser announced that the next meeting will be held at Pittsburg.

The meeting was adjourned at 10:45. An enjoyable informal half-hour, with a buffet luncheon, followed.

1 1 1

The March meeting of the Contra Costa County Medical Society was held jointly with the Woman's Auxiliary on the evening of Tuesday, March 13, at the Los Medanos Hotel, Pittsburg.

Dinner and entertainment of a most unusual interest, preceded the regular meeting. Doctor Fraser introduced Dr. M. L. Fernandez, who then showed reels of travel pictures which he had taken on his trip through the Hawaiian Islands, Fiji, Bali, New Zealand, New Guinea, Borneo, Siam, China, Japan, and the Philippines. Some of the pictures were in black and white, others in color. The delightful way in which Doctor Fernandez explained the temples and the trips gave those present a unique treat.

As the meeting was purely social, all routine business was suspended.

The thanks of the society is due Doctor Stauffer, who served as chairman of the Committee on Arrangements.

1 1 1

The April meeting of the Contra Costa County Medical Society was held on Tuesday, April 11, with the members of the Solano County Medical Society as guests.

The scientific paper of the evening was presented by Dr. Harold H. Hitchcock of Oakland. His theme was *Some Orthopedic Principles Involved in the Treatment of Fractures*. The subject was most ably presented, and the animated and extensive discussion which followed proved its deep interest. The discussion was conducted by Doctors Longabaugh and Fry of Solano, Higler of Napa, and U. S. Abbott, J. McCullough, and C. Leggo of Contra Costa. Doctor Fraser expressed the thanks of the joint societies to Doctor Hitchcock for the delightful scientific treat of the evening.

Doctor Fry, president of the Solano County Medical Society, expressed the pleasure of his society at being invited to attend the Contra Costa County meeting, remarking that there had not been a joint meeting

between our two adjoining county medical societies since 1904.

The following communications were read by the secretary:

Letter and resolution from the California Medical Association protesting the abolition of the State Narcotic Enforcement Laws, and the rehabilitation work. This was referred to the Committee on Public Policy and Legislation, Dr. Harry G. Ford, chairman.

Resolution from the Solano County Medical Society protesting against civilian practice by the naval officer detailed by the United States Navy Department to the care of the dependents of naval veterans. This was explained by Doctor Longabaugh of Vallejo, remarked upon by Dr. Harry Ford of Richmond, and by Dr. C. Leggo of Crockett. A motion was made by Dr. H. G. Ford and seconded by Dr. C. Leggo that the Contra Costa County Medical Society go on record as endorsing the measure, and that the secretary be instructed to forward copies of this endorsement to the various bodies to which the Solano County Medical Society had sent their resolution. Motion carried.

A card of thanks from Mrs. R. J. P. Harmon for the flowers sent her during her recent illness by the society.

Application for membership in the society by Dr. William Powell was read and acted upon favorably.

A report was made on the improved health of Doctor Hely, who has been ill for months; the return to active duties of Doctor Nevius, who has had a recent attack of pneumonia; and of the illness of Dr. Rosa Powell.

Announcements were made by Doctor Fraser of the State Medical Convention to be held at Del Monte this month, of several committee meetings, and the information that our next meeting will be held in Richmond.

The attendance was twenty-five.

The meeting was adjourned at 10:18 by Doctor Fraser, after which refreshments and a social meeting followed.

CLARA H. SPALDING, *Secretary*.

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ORANGE COUNTY

The regular April meeting of the Orange County Medical Association was held at the American Legion Club in Fullerton, where a seven-o'clock dinner was enjoyed by the members. Following the meal the members adjourned to the hall, where the regular business meeting was held before the scientific program.

Dr. John Ball, as chairman, had arranged for the presence of Dr. John C. Wilson of Los Angeles, who gave a highly instructive talk, demonstrated by numerous slides, on *Fractures and Diseases About the Hip*. The differential diagnosis of several diseases involving this region was well brought out, as well as newer methods of treatment and surgery.

WALDO WEHRLY, *Secretary*.

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SAN BERNARDINO COUNTY

The San Bernardino County Medical Society held its meeting at Loma Linda on Tuesday, April 4.

About seventy members and guests were present at dinner, which was served at 6:30 p. m. While dinner was in progress a representative from the Ruth Protective Home in El Monte spoke of the work of that institution.

Dr. Harold Walton, superintendent of the hospital at Loma Linda, welcomed the visitors.

The business meeting was called to order at 7:45 p. m. The application for membership for Dr. W. T. Engelman was voted on and accepted. The question of the adoption of the new Constitution and By-Laws was voted on and unanimously carried.

The nominations for officers for the next year were read and nominations called for from the floor, but none were made. The nominations are as follows:

President, C. L. Emmons; first vice-president, E. H. Hull; second vice-president, H. G. Gentry; secretary-treasurer, E. J. Eytinge. Delegates—F. B. Moor, A. T. Gage, C. F. Whitmer. Alternates—E. H. Hull, F. F. Abbott, H. G. Gentry.

The program of the evening followed: *Diagnosis of Ovarian Dysfunction* by Lee Samuels, Ph.D. Discussion opened by Dr. F. W. Gardner. *Review of Recent Laboratory Methods* by Dr. Charles M. Dale. Discussion opened by Dr. F. F. Abbott. *Some Aspects of Treatment of Congestive Heart Failure* by Dr. E. H. Ehlers. Discussion opened by Dr. Donald Brumbaugh.

E. J. EYTINGE, *Secretary*.



SANTA BARBARA COUNTY

The regular meeting of the Santa Barbara County Medical Society was held in the Bissell Auditorium of the Cottage Hospital on Monday, April 10, at 8 p. m., Vice-President Edward L. Markthaler presiding.

The vice-president introduced the speaker of the evening, Dr. Douglas R. Drury, professor of physiology, University of Southern California School of Medicine, who gave a most instructive talk on *Recent Advances in Physiology*. The paper was discussed by Doctors Smith, Sansum, and Gray.

Doctor Friedell reported for the committee which investigated the Santa Maria hospital. The society unanimously adopted the report, and instructed the secretary to forward a copy of these recommendations to the Board of Supervisors.

Doctor Henderson reported for the Public Relations Committee and read a communication from Doctor Dickie regarding proposed legislation to control clinics. After some discussion it was moved, seconded and carried that the Public Relations Committee be empowered to endorse this action and any other action of the legislative committee of the state society.

WILLIAM H. EATON, *Secretary*.



SONOMA COUNTY

The meeting of the Sonoma County Medical Society for the month of April was held as a dinner at the Clover Inn, in Cloverdale.

Eleven members of the Mendocino County Medical Society, two from Lake County, three from Napa County, two from San Francisco, including the guest speaker, Dr. William B. Faulkner, Jr., from the surgical staff of Saint Mary's Hospital, with twelve members of the Sonoma County Society made up the group.

A good dinner was enjoyed, following which Doctor Faulkner gave an illustrated talk upon the subject of *Chest Injuries and Their Treatment*. All present expressed themselves as being highly pleased with the meeting. It gave members from five counties a chance to meet one another personally, exchange views, and receive beneficial instruction in a very important branch of the medical and surgical service of modern life.

W. C. SHIPLEY, *Secretary*.



TULARE COUNTY

The regular monthly meeting of the Tulare County Medical Society was held at Motley's Café, dinner preceding the meeting. Doctor Kohn, president, presided.

Various communications were read regarding recent legislation at Sacramento.

Doctor Fowler, chairman of the Membership Committee, introduced the two newly elected members, Dr. John R. Fillmore of Strathmore and Dr. C. S. Mitchell of Dinuba.

Dr. Stacy R. Mettier, hematologist at the University of California, was guest speaker and ably presented papers on *Pernicious Anemia* and *Simple Chronic Anemia*. Considerable discussion followed, giving evidence of a lively interest in these problems.

KARL F. WEISS, *Secretary*.

VENTURA COUNTY

The meeting of the Ventura County Medical Society was held in the clinic building of the Ventura County Hospital on March 14. Dr. F. Royal Hendricks called the meeting to order at 8 p. m.

A communication from the Southern California Surgical Appliance Association in reference to Assembly Bills No. 1924 and No. 313 was read. Moved, seconded and passed that this society go on record as opposed to both of these bills.

A communication from the Cancer Commission inviting members to Del Monte on April 23 was read and the secretary instructed to send names of members that would attend.

A resolution from the California Medical Association protesting the abolition of the State Narcotic Enforcement Laws was read.

A communication from the Council of the California Medical Association on physical therapy was read and tabled.

A communication from the Cancer Commission asking for about fifteen minutes on a meeting program to present one or more of their reports, was read. It was acted on favorably for a near future date.

Dr. W. S. Clark was appointed program chairman for the April meeting.

WILLIAM FELBERBAUM, *Secretary*.

CHANGES IN MEMBERSHIP

New Members (56)

Alameda County.—Hubert Edward Long, James C. Raphael, J. R. Masterson, G. Douglas Ream.

Fresno County.—William F. Chamlee, Raymond R. Scott, James Harrison Van Vorhis.

Kern County.—George O. H. Buchner, R. B. Rees.

Los Angeles County.

Arthur Wesley Allum	Jacob Holt McCracken
Willa A. Cameron	Edward Choate Pallette
Edward R. Cox	Michael L. Ravitch
Ben Franklin Feingold	Emmett LeRoy Schield
Victor Goldberg	George Stevenson Sharp
Milton Metcalfe Hare	Phil W. Shumaker
R. F. Hastreiter	Valentine St. John
Earl Hyman	Pierre J. Walker
Francis Theodore Johnson	Sidney L. Weinberg
Edward J. Kilfoy	J. E. Whitlow
William M. Maloney	Blaine A. Young

Marin County.—Anne Lucille Brady, David Gordon Schmidt.

Napa County.—Fred Didier Heegler.

Orange County.—Frank Ashmore, E. F. Bruning, Fred Earel, Paul Bernard Gillespie, Howard Adani Huenergardt, Arthur Nies, F. W. Weston.

Riverside County.—Mary Catherine Baldwin, Joseph Jennings H. Smith, B. Gene Morris.

San Francisco County.—Henrietta Damkroeger, Louis Roncovieri, Morris Richard Gordon, Charles Albert Shumate.

San Joaquin County.—Clarence Ing.

San Mateo County.—Edwin Joseph Kehoe, Roswell Donaldson Borley.

Santa Clara County.—Ralph Wesley Wright, John C. Silliman.

Sonoma County.—Byron Lee Baldwin.

Tulare County.—Charles Sutherland Mitchell, W. R. Bridgman, John Rollo Fillmore, Palmer Donald Miller.

Transferred (5)

Leo P. Bell, from Yolo to Sacramento County.
Ira O. Church, from Contra Costa to Alameda County.
Thomas W. Hagerty, from San Joaquin to Los Angeles County.
S. S. Kalman, from Placer to Alameda County.
L. G. Tyler, from Humboldt to Marin County.

In Memoriam

Dickerson, Wilmer Lambert. Died in Long Beach, March 23, 1933, age 77 years. Graduate of Rush Medical College, Chicago, 1893. Licensed in California, 1911. Doctor Dickerson was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.

✦

Stivers, Charles Gaskill. Died in Long Beach, March 25, 1933, age 63 years. Graduate of the University of Pennsylvania School of Medicine, Philadelphia, 1891. Licensed in California, 1897. Doctor Stivers was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.

THE WOMAN'S AUXILIARY TO THE CALIFORNIA MEDICAL ASSOCIATION*

Official Notice

Excerpt from President's Letter to County Auxiliaries

From time to time the state board passes certain rulings. These in turn are passed on to the county presidents. As these regulations are not a part of your Constitution or By-Laws, they are frequently lost in transit. The officers to whom they are given respect and accept them, but too often, in the change of officers, they are forgotten and omitted in the list of duties. With this in mind, the president is suggesting that each county president make it a part of her duty to keep a "policy book." This may be an inexpensive notebook in which is listed the requests and policies of the state board. This book should be given to the incoming officer, with such explanations as are necessary. Will you please do this, so as to help your auxiliary to keep the ground already gained. The construction of an organization is faulty when it takes a new officer two or three months to learn her duties.

MRS. F. E. COULTER, *President.*

Component County Auxiliaries

Alameda County.—Alameda County Auxiliary had two interesting meetings this spring. The meetings are held in the Women's Athletic Club, facing Lake Merritt. A half-hour's reception preceding the luncheon has done much to increase friendliness in the Alameda auxiliary. The privilege of one guest at each meeting has brought in many new members. Twelve joined in March, bringing the membership to over two hundred.

Programs, each alternate month, immediately follow luncheon, and are presided over by the president, Mrs. Charles E. Dukes.

At the January meeting Dr. Chauncey D. Leake spoke on *California's First Real Scientist*, Dr. James Blake. Doctor Blake was a most interesting and capable man who did much for the state along scientific lines in the early days of the gold rush. His work was especially appreciated at this time when so many undesirable characters came to this coast. Doctor Leake's humorous stories of early California history and the part that Doctor Blake played in this romance

* As county auxiliaries to the Woman's Auxiliary to the California Medical Association are formed, the names of their officers should be forwarded to Mrs. Clifford A. Wright, chairman of the Publicity and Publications Committee, 454 South Irving Boulevard, Los Angeles. Brief reports of county auxiliary meetings will be welcomed by Mrs. Wright and must be sent to her before publication takes place in this column. For lists of state and county officers, see advertising page 6. The Council of the California Medical Association has instructed the editor to allocate one page in every issue for Woman's Auxiliary notes.

made a most enjoyable lecture, as well as inspiring us to know more about California's first real scientist.

A card party for members of the auxiliary and their friends, to start a philanthropic loan fund to aid doctors and their families who happen to be in need, was given in February. Mrs. Carl Bowen, Mrs. Frank Bowles, Mrs. W. F. Holcomb, and Mrs. George McClure opened their homes as hostesses for the affair, and almost \$200 was raised.

The program for the regular March meeting was given by a member of the Alameda County Medical Association, Dr. Romilda Paroni Meads. Doctor Meads gave a most illuminating talk, illustrated by charts on the findings of the committee from the Julius Rosenwald Foundation, on *The High Costs of Medical Care*. She had many interesting charts, showing the comparison of costs of medical care with other things, as education, food, clothing, etc., and the members of our auxiliary appreciated very much having had the privilege of hearing the result of her research.

Health Center work, such as making clinical records for the doctors, is being carried on by eighteen members, under the direction of Mrs. L. B. Barnard, the work being done regularly once a month.

MRS. LOUIS H. DYKE.

* * *

Los Angeles County.—The Woman's Auxiliary of the Los Angeles County Medical Society met at the Ebell Club on April 18, with a luncheon preceding the order of business. The president, Mrs. A. Bennett Cooke, presided.

The first in order was the ratifying of the appointment of delegates and alternates to the convention.

Mrs. Philip S. Doane presented a resolution that the secretary write a letter of appreciation to Dr. William B. Duffield for his recent articles commending the auxiliary.

Mrs. A. A. Swan, an artist of some note, was introduced and gave a short talk on *Seeing China Through Artists' Eyes*. She was followed by her husband Dr. Swan, a practicing physician in Shanghai for fifteen years, who spoke on the scientific side of China.

A discussion was led by Mrs. Cooke on *What Our Auxiliary Is Doing*, with especial emphasis on the distribution of *Hygeia* among the general public as a means of education and protection against cults. The speaker for the current events part of the program was Miss Ethel Swope, secretary of District 5, California State Nurses' Association, who talked on modern nursing. Miss Swope played an important rôle in organizing the relief work in Long Beach following the recent earthquake.

The meeting was brought to a close by a personal greeting of the new president by the individual members.

* * *

Orange County.—The April meeting of the Orange County Medical Auxiliary took the form of a luncheon in honor of our state president, Mrs. F. E. Coulter, held at the Santa Ana Ebell on Tuesday, April 4, at one o'clock. A committee, including Mesdames D. R. Ball, H. G. Huffman, R. P. Yeagle, L. Cameron, Glen Curtiss, Arthur Robbins, K. H. Sutherland, Charles Petty, Danforth Cowles, Frank Chaplaine, and J. B. Price, prepared and served a delicious luncheon in the perfectly appointed rooms of the Santa Ana clubhouse.

A most interesting musical program was arranged by Mrs. Charles Curtiss, consisting of violin solos by Mr. Collis and vocal numbers by Gordon Drew, guest artists from Fullerton. Mrs. Harry May, accompanied by Mrs. Curtiss, sang a group of delightful spring songs.

Mrs. W. L. Mitchell, widow of the late Doctor Mitchell, first health officer in Santa Ana, was presented with an honorary membership in the county auxiliary.

Dr. Florence Keller, formerly on the university staff of New Zealand, speaker of the day, chose as her topic, *Literature*. She regretted that in America today there is an undercurrent of degrading literature,

poisoning the minds of the youth and defaming the characters of national heroes.

The business meeting for the afternoon was postponed.

On March 4 the members of the auxiliary were guests at the Whittier State School. In the absence of Doctor Sabichi, Mr. Barton, together with Mrs. Sabichi and the Rev. Milton Lutz, conducted a most interesting and instructive tour of the shops, school quarters, and attractive cottages of the school. The various buildings were orderly, busy places, and each boy seemed happy in performing his individual task. There were no signs of the old traditional reform school. The cottages were tidy, well equipped and attractive homes for the children. One interesting group entertained the women with a program of music.

The Whittier plan included, first, a medical diagnosis, then educational, vocational, and recreational guidance, individual moral counseling, and a psychologic and psychiatric study of the boy's conflict.

The tour was followed by a delightful tea hour in the home of Mrs. Sabichi, with Mrs. Coulter and Mrs. Cushman assisting. A short business meeting followed, during which time plans were made for the luncheon to honor Mrs. Coulter. The committee appointed for the luncheon included Mesdames Dexter Ball (chairman), Huffman, Yeagle, Cameron, Curtis, Robbins, Sutherland, Petty, Price, Chaplaine, and Cowles. Thirty-five members and several guests were present.

YULA MOORE, *Secretary*.

Riverside County.—The Woman's Auxiliary to the Riverside County Medical Society was delightfully entertained by Mrs. Paul F. Thuresson and Mrs. Erwin P. Miller at their two recent meetings,

Mrs. A. W. Walker, president, presided over a short business meeting. The auxiliary discussed plans for the Hospital Day program on May 12, which is to be sponsored by the auxiliary at the Riverside Community Hospital.

Mrs. Hervey S. Faris will represent the local auxiliary at the meeting of the California State Medical Association at Del Monte on April 24-27.

Dr. W. B. Wells, county health officer, addressed the group on public health problems in Riverside County in relation to doctors. Miss Frances Fraser, dean of women at Riverside Junior College, who is also president of the Riverside County Clinic, gave an interesting talk on nursing services in Riverside County.

IRENE S. BALL, *Secretary*.

Sacramento County.—At the annual meeting of the Woman's Auxiliary to the Sacramento Society for Medical Improvement held on March 21 at the Tuesday clubhouse, Mrs. Frederick N. Scatena was re-elected as president. Other officers selected for the new term were: Mrs. J. Howard Hall, first vice-president; Mrs. Burt F. Howard, second vice-president; Mrs. Katherine Voisard, treasurer; Mrs. Frank P. Brendel, corresponding secretary; Mrs. George A. Foster, recording secretary; Mrs. A. K. Dunlap, Mrs. Lillian Arthur and Mrs. Paul Frame, directors.

Dr. Phillip G. Young, chairman of the Public Relations Committee of the Sacramento Medical Society, discussed the county charter and its relation to the medical profession.

Annual reports were submitted by the chairmen of committees. Mrs. Scatena reviewed the activities of the year and gave a report of a recent state board meeting held in Los Angeles. Delegates to attend the convention late in April at Del Monte will be elected at the next meeting. Members adjourned to the tea room, where refreshments were served by the following hostesses: Mesdames C. B. McKee, Eugene Pitts, S. G. Wells, Ernest Sevier, D. Schuyler Pulford, Paul Christman, Richard Soutar, James T. Vance, and Frank Brendel.

MRS. ERNEST SEVIER, *Secretary*.

San Diego.—The Woman's Auxiliary to the San Diego County Medical Association met in regular session at the Men's University Club. San Diego is another of the auxiliaries meeting for luncheon preceding the business session, over which Mrs. Charles E. Howard, president, presides. Plans were made for convention chairmen.

Mrs. H. P. Newman gave a clever current event review, the first of a series planned by the Program Committee.

Dr. F. C. Snoboda was the guest speaker of the day, using as the subject of his talk, *Medical Aviation*. This was most interesting and enlightening.

MRS. ELLIOTT G. COLBY, *Secretary*.

San Joaquin County.—The Woman's Auxiliary to the San Joaquin County Medical Association have four meetings a year, this being the pleasure of the members. The time so far has been devoted largely to organization and becoming acquainted. Undoubtedly the future will show accomplishment of worthwhile work.

MRS. PERCY B. GALLEGOS, *Secretary*.

Santa Barbara County.—The Woman's Auxiliary to the Santa Barbara County Medical Society met at the home of Mrs. Henry G. Profant, Mission Canyon, on Monday, April 10.

The guest speaker, Miss Jane Sedgewick, of the State Departments of Institutions and Finance, told practically the whole story of state institutions, interjecting her talk with only those statistics which had a definite bearing on her subject.

In the absence of Mrs. Friedell, chairman, Mrs. Profant gave the report of the Nurses' Award Investigating Committee. Mrs. Can Paing moved to base the award on efficiency as a nurse and not on leadership and scholarship. The secretary was instructed to write letters to Miss Helen Lord and Miss Marian Petchner, superintendents of our two nursing schools, telling them of the decision of the auxiliary.

Discussion of plans for an informal buffet supper, Dutch style, as a means for starting our Nurses' Award Fund, followed.

MABLE HUNT, *Secretary*.

NEVADA STATE MEDICAL ASSOCIATION

O. HOVENDEN, McGill	President
D. A. SMITH, Mina.....	President-Elect
J. N. VAN METER, Las Vegas	First Vice-President
FLEET H. HARRISON, Minden.....	Second Vice-President
HORACE J. BROWN.....	Secretary

COMPONENT COUNTY MEDICAL SOCIETIES

CLARK COUNTY

The Clark County Medical Society held its regular meeting on March 20 at the Apache Hotel, Las Vegas.

The meeting began with a dinner, and was attended by the members and their wives.

Dr. and Mrs. James F. Percy of Los Angeles were the guests of the evening.

At the business meeting a motion was passed authorizing the formation of a chapter of the Woman's Auxiliary.

Dr. James F. Percy addressed the meeting on *Cancer—Its Treatment and Prognosis*.

The Clark County Medical Society met on Tuesday, April 11, for its regular monthly meeting.

Dr. Forest R. Mildren of Las Vegas presented the program with films: *Surgical Treatment of Peptic Ulcers*, *Ventral Hernia with Lipectomy on 450-Pound Woman*.

J. N. VAN METER, *Secretary*.



WASHOE COUNTY

The Washoe County Medical Society held its regular monthly meeting in the Nevada State Building, Tuesday evening, April 11.

Doctor Creveling read a communication from Sacramento relative to the cost of hospitalization through means of a medical organization. The organization referred to was sponsored entirely by hospitals, dentists, and physicians, and not in any way connected with the lay organization. Inasmuch as the society could come to no conclusion in so brief a time, the president, Dr. A. R. DaCosta, instructed Dr. J. L. Robinson to communicate with the person designated who was representing the organization and inform him that the society would defer action until better informed.

The next communication was one reported by the secretary received from the Maternity Center Association of New York. After explanation from the secretary and upon his motion, properly seconded, it was moved that a joint committee be appointed by the Washoe County Medical Society to act in conjunction with the State Medical Society. This committee to get together at once and get in touch with all the medical organizations of the state and induce the local medical organization to bring the subject for better maternity care before either the women's clubs of their towns or through such other means, such as radio or newspaper, as they might think best suited to the purpose. As stated, the object is to cooperate with the intelligent laity concerning better prenatal care for the motherhood of America. The exercises or speeches or whatever else the program might be entitled, to be in honor of Mother's Day, which will fall on May 14. The chair appointed Doctors Paradis, Sullivan, and Samuels.

Business being disposed of, the next consideration was witnessing the following films, as made and served by Dr. Carl Henry Davis, professor of gynecology and obstetrics of the Marquette University, Milwaukee. They were as follows: Watkins Transposition Operation; Mayo Vaginal Hysterectomy; and Abdominal Hysterectomy.

Following the cinema, the society listened to a brief but highly interesting talk by Doctor Parsons, a recent member of the medical body of Reno and the pathologist for Saint Mary's Hospital. His talk was on *Uterine Bleeding*, which talk fitted in very well with the subject of the films as shown. Doctor Parsons called special attention to the fact that the characteristic feature in the curetted endometrium, which when chronically thickened and the type of which was usually found in the granulomata endometrium was characterized microscopically by the Swiss cheese pattern, as designated by Emil Novak of Baltimore. The speaker said that in all suspicious cases an early resort to bioscopy and curettage for diagnostic purposes would in many instances forestall the dreadful inroads from a beginning carcinoma and that an early operation would, without doubt, save the patient. The talk was greatly enjoyed.

There were nineteen members present.

THOMAS W. BATH, *Secretary*.

Woman's Auxiliary to the Nevada State Medical Association

Clark County.—The following officers were elected at the first meeting called to organize a Woman's Auxiliary to the Clark County Medical Society on March 18 at the home of Mrs. J. N. Van Meter of Las Vegas: Mrs. Roy W. Martin, president; Mrs. Forest Mildren, first vice-president; and Mrs. J. N. Van Meter, secretary-treasurer.

The meeting followed a charming luncheon for the local physicians' wives, given by Mrs. Van Meter in honor of Mrs. James F. Percy of Los Angeles, national president of the Woman's Auxiliary to the American Medical Association. Mrs. Percy outlined the objects and aims of the auxiliary and suggested activities which may be sponsored. Mrs. Percy stressed particularly that authoritative speakers on health subjects be presented to other organizations, under the auspices of the auxiliary. An earnest and commendable zeal was manifested in the formation of this new organization, encouraged as they were by the Clark County Medical Society. One of the first activities of this new group was to plan for the entertainment of the Nevada State Medical Association and the first annual meeting of the Nevada State Woman's Auxiliary, which will be held at Las Vegas this fall. The state officers are: Mrs. A. J. Hood, president, and Mrs. J. Horace Brown, secretary-treasurer, both of Reno.

Those who signed as charter members at Las Vegas, in addition to the three officers named above, were: Mesdames R. D. Balcolm, C. W. Woodbury, M. L. Herzig, P. R. McDaniel, and J. W. McDaniel.

On March 20 Mrs. R. D. Balcolm was hostess at a delightful tea given in honor of Mrs. Percy and the newly formed auxiliary and its officers, at which thirty guests were present. In the evening the auxiliary members and the Las Vegas Dental Society were guests of the Clark County Medical Physicians at a banquet at the Apache Hotel in honor of Dr. James F. Percy, who, following the dinner, spoke on the subject, *A Review of the Cancer Problem from the Standpoint of Treatment and Prognosis*.

Petition of University Instructors to President von Hindenburg.—Mention has been made in these letters of the distressing effects of the existing economic situation on the progress of science. The situation is worse than is commonly supposed. Statements may frequently be heard from directors of university institutes to the effect that the appropriated moneys at their disposal will be exhausted by the end of the year, whereas these constantly reduced sums are supposed to suffice until the close of the fiscal year, or until April 1.

The result will doubtless be that many scientific institutes will be compelled to limit their research and may be forced to close for a time, although the courses of instruction would have to be maintained. In this situation, a most unusual step has been taken. Eminent research workers in all fields, constituting a list of 140 names of men of science, have sent directly to President von Hindenburg an appeal for the preservation of scientific research. They point out that the Notgemeinschaft der Deutschen Wissenschaft and the celebrated Kaiser-Wilhelm-Gesellschaft zur Förderung der Wissenschaften, with their institutes that are known throughout the world, are being embarrassed in their research work by the lack of funds. They emphasize that any further reduction in their appropriations would be unendurable. They state that the amounts granted to these societies are only a small proportion of the whole federal budget, and that increases within possible limits would "assure the most necessary progress of research." It must be emphasized that the work in the fields of art and science—from the researches of the academies down to the work of independent individuals—must be consecutive in order to be of value. It is not a simple matter that, when funds are not available, a research institute can be allowed to lie idle for a time, a scientific journal can be permitted to discontinue publication, or a scientific society can be allowed to struggle along until better times appear. It is, on the contrary, unquestionably true that the sums withdrawn, during hard times, from intellectual fields must be restored twice and thrice over, at other points, in order to compensate even partially for the damage caused.—*Berlin News Letter*. (*Journal of the American Medical Association*.)

MISCELLANY

Under this department are ordinarily grouped: News; Medical Economics; Correspondence; Twenty-five Years Ago column; Department of Public Health; California Board of Medical Examiners; and other columns as occasion may warrant. Items for the News column must be furnished by the fifteenth of the preceding month. For Book Reviews, see index on the front cover, under Miscellany.

NEWS

Coming Meetings.

American Medical Association, Milwaukee, Wisconsin, June 12 to 16, Olin West, M. D., 535 North Dearborn Street, Chicago, Secretary.

American Association for Study of Goiter, Memphis, Tennessee, May 15 to 17, R. J. Yung, M. D., Terre Haute, Indiana, Secretary.

California Medical Association, Riverside, California, spring of 1934. (Date to be announced later.)

Congress of Physicians and Surgeons of North America, Washington, D. C., May 9 to 10, John T. King, Jr., M. D., 1210 Eutaw Place, Baltimore, Maryland, Secretary.

Pacific Coast Oto-Ophthalmological Society, San Francisco, June 28 to 30, Frederick C. Cordes, 384 Post Street, San Francisco, Secretary.

Texas State Medical Association, Fort Worth, May 8 to 11, Holman Taylor, M. D., Medical Arts Building, Fort Worth, Texas, Secretary.

Western Branch of the American Urological Association, Vancouver, B. C., August 3 to 5, George W. Hartman, M. D., Secretary.

Medical Broadcasts.*

American Medical Association Health Talks.—The American Medical Association broadcasts on Monday and Wednesday from 9:45 to 9:50 a. m. (central standard time) over station WBBM (770 kilocycles, or 389.4 meters).

There is also a fifteen-minute talk, sponsored by the association, on Saturday morning from 9:45 to 10 over station WBBM.

San Francisco County Medical Society.—The San Francisco County Medical Society broadcasts every Tuesday from station KFRC, 4 to 4:15 p. m., and over station KJBS from 11:15 to 11:30 a. m.

Los Angeles County Medical Association.—The radio broadcast program for the Los Angeles County Medical Association for the month of May is as follows: Tuesday, May 2—KFI, 10:15 to 10:30 a. m., and KECA, 9:45 to 10 a. m. Subject: Childhood Tuberculosis.

Tuesday, May 9—KFI, 10:15 to 10:30 a. m., and KECA, 9:45 to 10 a. m. Subject: Children Who Might Live.

Tuesday, May 16—KFI, 10:15 to 10:30 a. m., and KECA, 9:45 to 10 a. m. Subject: Exercise for Normal Child.

Tuesday, May 23—KFI, 10:15 to 10:30 a. m., and KECA, 9:45 to 10 a. m. Subject: Heart Disease in Children.

Tuesday, May 30—KFI, 10:15 to 10:30 a. m., and KECA, 9:45 to 10 a. m. Subject: Sleeplessness in Children.

Errata.—In the discussion of Dr. Clifford Sweet's paper on "Treatment of Measles" by Dr. William M. Happ (April CALIFORNIA AND WESTERN MEDICINE, page 259, second column, seventh line), the word "case" was inadvertently changed to the word "patient." Correction is here made of the error.

In the copy of the California State Board of Medical Examiners in a recent issue, was an item concerning a Doctor Howson, the given name not being printed. The item referred to Dr. Christopher Howson of Oakland.

* County societies giving medical broadcasts are requested to send information as soon as arranged (giving station, day, date and hour, and subject) to CALIFORNIA AND WESTERN MEDICINE, 450 Sutter Street, San Francisco, for inclusion in this column.

Government Restrictions Concerning Medicinal Liquor.—On the discontinuance of the use of official prescription blanks, about January 1, physicians will be supplied free by the government with engraved stamps of a convenient size and design, suitable for affixing to a physician's ordinary prescription blanks. A physician who wishes to prescribe liquor will then be required to write his prescription on his ordinary prescription blank, in such form and detail as may be prescribed by regulations, and then, in order to validate his prescription, to affix and to cancel such a stamp. Until the date determined on for initiating the use of such stamps, physicians are to continue to use the present official forms with which they have been supplied.

While the new law provides that a physician shall not be called on to file in any government office any statement of the nature of the ailments from which his patients are suffering, physicians must continue to keep in their offices the book records now required, stating the nature of such ailments. These office records will assume an increased importance with the discontinuance of the filing of prescription stubs with supervisors of permits. These book records continue to be open to inspection by officers charged with enforcing federal prohibition laws. . . . —*Journal of the American Medical Association*, April 8, 1933.

Heart Committee Conference.—The San Francisco Heart Committee of the San Francisco County Medical Society conducted an institute recently on the prevention and relief of heart disease. The lectures, which began on March 15, were given on four successive Wednesday afternoons at four o'clock, in the new Health Administration Building of the San Francisco Department of Public Health.

The lectures were arranged for public health nurses, physical education teachers, and medical social service workers. The program was sponsored by the San Francisco Department of Public Health, the Physical Education Department of the San Francisco Board of Education, and the Cardiac Center of the Baby Hygiene Committee of the American Association of University Women. The program was arranged by the Section on Education and Publicity, of which Dr. John P. Strickler is chairman, assisted by Dr. Ellen Stadtmuller, Dr. Adelaide Brown, and Dr. John J. Sampson. The combined total attendance numbered at least one thousand.

The subject was presented according to the various age levels, as suggested by the White House Conference Committee.

University of California Medical School.—Dr. George W. Crile, head of the Cleveland Clinic, Cleveland, Ohio, conducted a clinic for the faculty and students of the Medical School on April 11.

Dr. J. C. Drummond, professor of biochemistry, University College, University of London, spoke to the faculty and students on April 6. He discussed the general subject of vitamins, with some comments on the clinical features of avitaminosis. Doctor Drummond was the Lane lecturer at Stanford University School of Medicine for 1933.

Dr. William H. Park, director of the laboratories of the New York Department of Public Health, spoke to the faculty and students on March 18.

Colonel William R. Dear of the Army Medical Corps spoke at the Medical School in March. His lecture was based on his experiences as senior medical officer with the American Russian Relief Mission.

Accident Prevention Week.—Governor James Rolph, Jr., has issued a proclamation declaring the week of May 21 to May 27, 1933, inclusive, to be Accident Prevention Week. During that week the Industrial Accident Commission, in coöperation with the California Safety Society, the National Safety Council, the United States Bureau of Mines, and other interested organizations, will hold an All-California Accident Prevention Conference on Wednesday and Thursday at the St. Francis Hotel, San Francisco. At this meeting the speakers will be men and women particularly qualified to speak on their respective subjects.

A plan for community accident prevention councils, which can be put into effect in the different communities will be presented and will coördinate the efforts of the various groups in the community to the end that the enormous loss of life, which is occurring daily in our homes, on the streets and in industry, may be reduced to the minimum.

CORRESPONDENCE

Subject of Following Letter: An Antivivisectionist Communication Referred to in the Editorial Column of this Issue of California and Western Medicine. (See Page 379.)

THE NATIONAL ANTIVIVISECTION SOCIETY
58 East Monroe Street
Chicago, Illinois

To Further a Humane Movement

Dear Fellow American:

Not so very long ago a small group of persons, whose names are synonymous in the public mind with accomplishment in many fields of activity, united for the institution of an effort to inject a new sort of humanitarianism into the current of modern thought.

Today the movement they inaugurated has become national in scope, strength and importance, and has won the sympathies and support of thousands of kindred spirits throughout the United States.

This movement has for its purpose the abolition of so-called "scientific" practices which involve indescribable agony to live, domestic animals used in surgical experimentation. Its forces have been mobilized under the standard of the National Antivivisection Society, from the Chicago headquarters of which you are receiving this communication.

The practices this society are opposing have been pronounced medieval and barbarous by world authorities. They occur daily in laboratories in all parts of the country, and have been denounced by outstanding medical men as futile and fanatic. They are described and commented upon in the pamphlet which accompanies this letter and which is sent to you so that you may be in possession of the facts that outraged the sensibilities of your intelligent fellow Americans and led to the formation of this organization.

We hope that these startling revelations will bring a new recruit into our campaign to stamp out a variety of intolerable evils consequent to the activities of vivisectionists. You will see how they are reflected in increased taxes and nullification of certain rights and liberties to which you, a law-abiding American citizen, are entitled.

We invite you, after considering these facts, to become a member of the National Antivivisection Society, and enclose an application blank for your convenience. Your support is urgently needed in this drive to halt the production and sale of injurious serums and vaccines, and to enact laws making illegal the torture of live animals without benefit of anesthesia.

Incidentally, not one cent of the funds received by this organization is utilized for salaries. They are expended solely in the interest of humane education to the end that vivisection may be abolished.

Looking forward to enrolling you as a member, we are,

Yours very truly,

.....
Managing Director.

VETERAN DISABILITIES AND RATINGS*

I

When the Federal Government closed its books for the fiscal year ending June 30, 1932, the American people were shocked to learn that total revenues from income taxes—individual and corporate combined—did not quite cover all the costs of the Veterans' Administration services for the twelve months just ended. Incredible as it seemed, the figures were indisputable. Income-tax collections for the year, as officially reported by the Secretary of the Treasury, were \$1,057,335,853, while the combined disbursements for veterans' pensions, hospitalization, disability allowances, construction, bonus loans and payments, and administrative expenses came to the neat sum of \$1,064,268,966.

Of the many bewildering fiscal problems brought into sharp relief by the depression, this, perhaps, was the most alarming—and for very good reason. During the decade from 1923 to 1932, income taxes had provided, on the average, 51.41 per cent of the federal revenues. At the close of that period, a single function of government—one administrative unit out of fifty-one in the federal establishment—called for more money in a year than had been garnered from the principal source of revenue.

Here was a critical situation indeed. How did it happen that things were brought to such a pass?

Back in 1921 the full cost of veterans' services had been \$662,481,718. This figure was hailed at the time as far and away the largest annual appropriation for such purposes which any government had ever made in all human history. True, there were still on the rolls of the Pension Bureau a thinning group of Civil War and Spanish-American War veterans; but their share of the annual bounty was but \$260,000,000, only about one-third of the total. The balance of \$402,000,000 was entirely for World War benefits. In the rosy dawn of the new economic era, the American people felt rather proud that they were caring for their war veterans in magnificent style. All of the direct death claims for field casualties in the World War had long since been paid, and the official records of the War and Navy Departments showed that, of the survivors of the conflict, there were only 234,161 who had been wounded in action. If each of these wounded veterans had been granted an outright allowance of \$1,000 a year (some \$400 more than the then average per capita income in the United States), the maximum annual cost would have been but \$234,161,000. To be actually paying annually almost twice that sum for hospitalization, vocational training, war risk insurance, and compensation, appeared, under the circumstances, a truly American expression of noble patriotism, a fine acceptance of a high moral obligation, satisfactory to the national conscience from every point of view.

By 1930 the combined disbursements in behalf of the veterans had increased to \$835,275,349, and the next year the figure leaped across the billion mark for the first time, to \$1,021,559,957. Since 1931 the annual expenditures, including authorizations for the fiscal year ending June 30, 1934, have averaged slightly more than \$1,000,000,000. Nor is this all. The special economy committee of the House of Representatives reported on April 25, 1932, that veteran costs for the decade 1933-1942 would, under prevailing laws, aggregate \$12,000,000,000, or an average of \$1,200,000,000 annually. Actuaries of the Treasury Department have submitted informal estimates to the House Committee on Appropriations placing expenditures for the veterans during the fiscal year 1949 at \$2,350,000,000. . . .

It is interesting to compare America's treatment of her veterans with that of some of the other principal powers engaged in the war. Germany, France, Great Britain, Italy, and Canada mobilized between them

* Excerpts from an article by Lawrence Sullivan in the *Atlantic Monthly*, April, 1933. (See also page 404.)

34,244,000 men. In 1932 these countries spent a total of \$891,000,000 to take care of their ex-soldiers. The United States mobilized 4,757,929 men, and the sum set aside for veterans in 1932 (after excluding all save World War benefits) was \$860,635,000. Our expenditure for veterans last year was at the rate of \$2,668.66 for every American soldier killed and wounded in action; the comparable figure for Germany, France, Great Britain, Italy, and Canada combined was only \$53.60. . . .

II

A three-way policy of compensation, hospitalization, and vocational rehabilitation for all wounded soldiers and sailors was enacted in a measure which came out of Congress as early as October, 1917. Six months after the declaration of war against Germany, President Wilson signed the enlarged War Risk Insurance Act, which provided (1) compensation for death and disability in the line of duty, (2) family allotments and allowances for the dependents of both officers and enlisted men, (3) hospital treatment for all men injured in the line of duty, (4) vocational rehabilitation for permanently maimed veterans, and (5) term life insurance at an average cost of \$9.60 a year for every \$1,000 of protection—a figure which placed upon the national government all the extraordinary risks of war over and above those covered in the peace-time actuarial tables, as well as all administrative costs. Private insurance companies at the time were charging \$70 a year per \$1,000 for the full war risks.

The general tenor and scope of this basic veteran legislation may be illustrated by a single provision (Section 302, subdivision 3), never before written into law by a nation at war:

"In addition to the compensation above provided, the injured person shall be furnished by the United States such reasonable governmental medical, surgical, and hospital services and with such supplies, *including artificial limbs, trusses, and similar appliances*, as the director may determine to be useful and reasonably necessary."

It is worthy of note that this bill, which still serves as the theoretical basis of all our elaborate veterans' administration, and which has been accepted throughout the entire world as the most equitable and comprehensive rehabilitation program ever enacted, became operative three years before the first veterans' league was organized. While it was under legislative consideration it was criticized on the ground that it was too generous, since it provided double indemnity through both compensation and insurance; but Congress justified this on the principle that the government owed the compensation for war injuries, regardless of any other benefits which a disabled soldier might collect from insurance. . . .

III

Before the Bureau of War Risk Insurance had been geared up to five miles of checks a day, a flood of liberalizing amendments to the original all-embracing compensation law poured in upon both Houses of Congress. So insistent became the demand for the inclusion of new classes of beneficiaries that an omnibus amendatory bill was soon passed, and it was signed by President Wilson on June 25, 1918. It provided a generally broader base of compensation, and abolished many of the legal formalities set up in the original law to limit awards strictly to those suffering disabilities directly connected with the military service. . . .

In February, 1919, a direct cash allowance of \$60 was provided for every person discharged from the military service, and in December of the same year the second general "liberalization" of the 1917 law was enacted. One of the most burdensome indirections of this second revision was Section 300, which made retroactive to April 6, 1917, the legal fiction that everyone accepted in the military service during the World War was in sound physical and mental condition. Any incapacity whatever suffered during the term of service thereby became a disability "incurred in the line of duty."

A further amendment to this section, in March, 1925, provided specifically that in cases of paralysis, paresis, blindness, and similar afflictions, no application could be denied because of the veteran's "own willful misconduct" either before or after his discharge. . . .

IV

On March 4, 1923, the 1917 law was again amended; this was its third "liberalization." The general legislative method employed in all these revisions was exhibited once more, in connection with the sections dealing with postwar tuberculosis. The original act provided conclusive presumption of service connection in all cases of "pulmonary tuberculosis" developed within two years after discharge. Reopening the section on the ground that many gas victims might become patients after two years, the veterans' lobby extended the presumptive period to three years.

But while thus revising the text they also struck out the word "pulmonary," thereby bringing in some 12,000 cases of other forms of tuberculosis developed since the war. Under the presumptive clause, of course, each of these new cases was automatically established as contracted "in the line of duty." . . .

V

First, the bonus bill was whipped through both houses over President Coolidge's veto. Next, the whole body of veteran law was codified in the World War Veterans' Act of June 7, 1924. In the process, scores of new "liberalizing" amendments were added, one of which extended to January 1, 1925, the presumptive period of service origin in all cases of tuberculosis, neuropsychiatric disease, paralysis agitans, and certain other afflictions. . . .

VI

Hence, there was another general revision of the administrative code in 1925, another in 1926, another in 1928, and yet another in 1930. Each brought large new classes under the provisions of the hand-out system. Each "liberalized" the requirements regarding evidence of service connection in disability claims. . . .

In 1930 the last pretense of limiting pensions to line-of-duty disability was abandoned. In that year a blanket provision was written into the law authorizing any veteran to claim benefits for sickness or injuries suffered *after* his term of military service. This eligibility extended to hospitalization as well as to monthly maintenance checks. So inclusive were its terms that a veteran who, in 1926, fell off a ladder in his own basement actually received free hospitalization plus a "disability allowance" for his broken leg. This general class of disability allowances, for injuries not even presumably connected with the military service, cost no less than \$105,147,800 during the first two years. And this sum was in addition, of course, to the \$189,540,380 paid out in 1932 for compensation in cases in which the disability, either presumably or in fact, arose from war service. It was in addition also to hospitalization costs of \$60,000,000 for the fiscal year 1932.

Testifying before the joint committee of the House and Senate which was set up to investigate abuses of the veteran laws, spokesmen for the National Economy League, in December, 1932, tabulated annual expenditures of \$457,000,000 which might be stricken from the 1934 veterans' budget without depriving any individual of either compensation or care originally awarded for military disabilities.

Similarly, in his last annual report, the Director of the Veterans' Administration, Brigadier General Frank T. Hines, informed Congress that the veterans' hospital load as of June 30, 1932, was 39,393, of which number 15,460 patients were being treated for service-connected disabilities, real or presumptive, while 23,472 were hospitalized for postwar sickness or injuries. In two special reports during the last five years the American Medical Association has vigorously denounced the hospitalization of nonservice cases as an indefensible drain upon the national treasury. But, as one of the Capital's most flamboyant veteran fixers once observed in an informal moment, "Who is the American Medical Association?" . . .

VETERANS' COMPENSATION

Summary of President Roosevelt's New Regulations*

On April 1 an Associated Press dispatch from Washington stated the White House issued the following explanatory summary of the 18,000-word order by President Roosevelt, slashing federal expenditures for veterans by some \$400,000,000:

Regulation No. 1. This pertains to the entitlement of pensions and is divided into three parts.

Part 1 of the regulation authorizes the payment of pensions to former members of the military or naval service who are disabled as a result of disease or injury incurred or aggravated in the line of duty in the active military or naval service during the Spanish-American War, the Boxer rebellion, the Philippine insurrection, and/or the World War.

STRESSES WAR SERVICE

The basic provisions are that the injury or disease must have been contracted or aggravated in the line of duty and without misconduct, in the active military or naval services during the Spanish-American War or the World War. As to persons serving in the Philippine Insurrection or the Boxer Rebellion, it is further required that they must have actually participated in hostilities. An extension is made as to the date of cessation of hostilities in the cases of those men who served in the Moro Province during the Philippine Insurrection and in Russia during the World War. It is not required that the disease or injury must have been incurred, or aggravated, prior to the cessation of hostilities. In all cases it is required that the person to be entitled must have been honorably discharged from the service.

A rebuttable presumption of soundness, except as to defects noted at the time of entry into service, for all persons who served ninety days or more is authorized.

RATES OF PAYMENT

A presumption of service connection or chronic diseases becoming manifest to a 10 per cent degree or more within one year from separation from active service is allowed, but the Government is authorized to rebut such presumption where there is affirmative evidence to the contrary or evidence to establish that an intercurrent injury or disease which is a recognized cause of such chronic disease has been suffered between the date of discharge and the onset of the chronic disease, or in case the disability is due to the person's own misconduct.

The monthly rates to be paid for war-time disabilities are: 10 per cent, \$8; 25 per cent, \$20; 50 per cent, \$40; 75 per cent, \$60; and 100 per cent, \$80. If the disabled person has suffered the anatomical loss or the loss of the use of one foot or one hand or one eye, the rate prescribed is increased by \$20 per month. If the disabled person has suffered the anatomical loss of both hands or of both feet, or of one hand and one foot, or is so helpless as to be in need of regular aid and attendance, the total rate is \$100. Certain additional specific rates for the more seriously disabled are provided.

Payment of pension on the basis of war-time rates is authorized for those men who applied for enlistment or were drafted or called into the National Guard during the World War and before being finally accepted for service were injured in line of duty.

PENSIONS TO SURVIVORS

Pensions to widows, children, and dependent parents of veterans who died from disease or injuries incurred or aggravated in the line of duty in the active military or naval service during the before specified war

periods are authorized. The rates adopted are those now provided under existing law for the same class of dependents of deceased World War veterans.

Part 2 of this regulation authorizes the payment of pensions to former members of the military or naval service who incurred disability in line of duty in the active military or naval service other than during war-time enlistments. In this class of cases it is required that the disability be contracted or aggravated in line of duty and without misconduct in the active military or naval service, and that the person be honorably discharged.

The rates of pension payable monthly are: 10 per cent, \$6; 25 per cent, \$12; 50 per cent, \$18; 75 per cent, \$24; 100 per cent, \$30. If the disabled person has suffered an anatomical loss or the loss of the use of one foot or one hand or one eye, the rate provided is increased by \$10. Special rates are provided for the most seriously disabled at 50 per cent of the rate provided for the same types of disabilities which were incurred in war-time service.

Payment of pensions to the widow, child or children and/or dependent mother or father of any person who died as a result of injury or disease incurred or aggravated in active military or naval service during peace time is authorized. The rates for these dependents are approximately 75 per cent of the rates authorized for the dependents of those who died from war-time disabilities.

Part 3 authorizes payment of pensions for nonservice-connected disabilities and deaths of veterans of the Spanish-American War, including the Boxer rebellion and the Philippine insurrection, and/or the World War.

The following requirements are set forth: (1) Ninety days or more service; (2) entry into the service prior to the cessation of hostilities; (3) honorable discharge; (4) the existence of permanent and total disability not the result of misconduct.

As to veterans who served in the Boxer rebellion or the Philippine insurrection, it is required that they must have actively participated therein to be entitled. In determining entitlement under this part of the regulation, it is not required that the ninety days' period of service shall have been completed before the cessation of hostilities.

The rate of pension for those permanently and totally disabled is \$20 per month. A pension of \$6 per month to those Spanish-American veterans over the age of sixty-two years is granted.

Pensions under this part of the regulation cannot be paid to any unmarried person whose annual income exceeds \$1000 or to any married person or any person with minor children whose annual income exceeds \$2500. This income provision, however, will not bar the payment of the \$6 monthly pension to Spanish-American War veterans over the age of sixty-two years.

The payment of pension to widows and children of deceased veterans of the Spanish-American war, including the Boxer rebellion or the Philippine insurrection, is authorized at approximately 50 per cent of the rates now provided for such persons, that is, \$15 per month for a widow with allowances for children.

Regulation No. 2. This contains the provisions relative to the filing of claims, the making of awards, the discontinuance of payments, and the review of claims. The provisions of this regulation are substantially in accord with the existing practices, except that it is specifically provided that if after calling for evidence in any claims such evidence is not received within six months, or excuse offered for noncompliance with the call, that the claim shall thereafter be barred.

Regulation No. 3. This authorizes the establishment of a new rating schedule. This schedule is to be based upon the average impairment resulting from disabilities in all occupations so that all men with the same disability will receive the same pension.

* See also page 402. Also references in opening article by Doctor Wilbur, page 337.

This schedule of disability ratings provides only five rates of disability, namely, 10 per cent, 25 per cent, 50 per cent, 75 per cent, and 100 per cent. Heretofore the rating schedules have been from 10 to 100 per cent at 1 per cent intervals.

Regulation No. 4. This merely carries into effect the provisions of Section 17 of Title 1 of the Act, which provides, with certain exceptions, that those veterans suffering with diseases or injuries directly connected with the active military or naval service should not be removed from the rolls.

Regulation No. 5. This pertains to entitlement to emergency officers' retirement pay and provides that any emergency officer heretofore granted retirement pay shall be entitled to continue to receive such retirement pay if the disability for which he has been retired with pay resulted from disease or injury incurred in line of duty during war service. It is further required that the officer must have been heretofore properly rated 30 per cent disabled, and that the disease or injury or aggravation of disease or injury directly resulted from the actual performance of military or naval duty.

Regulation No. 6. This authorizes hospital and domiciliary care, including necessary medical treatment. It also authorizes, within the limitation of veterans' administration facilities, hospital treatment for veterans of wars who are suffering with injuries or diseases which were incurred in the active military or naval service and domiciliary care to those veterans who served in the active military or naval service for a period of ninety days or more, who are suffering with permanent disabilities or tuberculous or neuropsychiatric ailments which incapacitate them from earning a living. It is further required that, as to this latter class of veterans, they have no adequate means of support. This is a marked departure from previously existing law. First, it excludes from entitlement peace-time veterans. Second, it provides hospital treatment, as such, only for veterans of wars, suffering with diseases or injuries which were incurred or aggravated in line of duty in the active military or naval service. Third, it requires ninety days' service to be entitled to admission for domiciliary care. Fourth, hospital or domiciliary care for nonservice-connected temporary conditions is no longer authorized.

This regulation also authorizes the furnishing of clothing to a person in veterans' administration facilities, only where the veteran is indigent and the furnishing of clothing is necessary to protect health or sanitation, or where the veteran requires special clothing made necessary by the wearing of prosthetic appliances.

Under the provisions of this regulation, no person is entitled to receive domiciliary, medical or hospital care, including treatment, who resides outside the continental limits of the United States, or its territories or possessions. Further, it is provided that the pension of any person suffering with a service-connected disability who is being furnished hospital treatment, institutional or domiciliary care by the United States or any political subdivision thereof, shall not exceed \$15 per month, but that if there is a dependent wife, child or children, dependent mother or father, the difference between \$15 and the amount otherwise payable shall be paid to such dependents.

Regulation No. 7. Authorizes the granting of medical care to veterans suffering with service-connected diseases or injuries. This regulation merely carries on the existing practices with regard to this class of cases.

Regulation No. 8. Pertains to yearly renewable term insurance and authorizes the conversion of such insurance to United States Government life insurance in

those cases where the insured had disappeared and such insurance is being continued by payment of premiums by the beneficiary. It also authorizes conversion to United States Government life insurance in those cases where an insured who is now totally and permanently disabled and drawing benefits recovers from such permanent total disability in the future.

Regulation No. 9. Pertains to burial of deceased war veterans and authorizes the issuance of a flag to drape the casket and after burial to be given to the next of kin in all cases. It authorizes an allowance for funeral and burial expenses, including transportation of the body, in an amount not to exceed \$75 unless (a) the veteran's net assets at time of death, exclusive of debts, equals or exceeds \$75; (b) the veteran has accrued benefits due from the veterans' administration in an amount equal to or in excess of \$75; (c) an allowance for burial and funeral, including transportation, is provided by a state, county, or fraternal organization, etc.

Regulation No. 10. Contains the miscellaneous provisions, such as definitions, etc., and is particularly important in the following respects:

One, provides that no person holding an office or position, appointive or elective, under the United States Government or the municipal government of the District of Columbia or under any corporation, the majority of the stock of which is owned by the United States, shall be paid a pension or emergency officers' pay, except (1) those receiving pension or emergency officers' retirement pay for disabilities incurred in combat with an enemy of the United States, and (2) those persons so employed who are protected by the specific provisions of the Act. As to such latter class, it is provided that the rate of pension shall only be \$6 per month.

Two, persons living outside of the continental limits of the United States, exclusive of Hawaii, Alaska, and the Panama Canal Zone, while so residing, shall only receive 50 per cent of the amount of pension or emergency officers' retirement pay otherwise provided.

Three, defines those persons who are entitled to benefits and who are barred from participating in decisions. This definition is that those persons who are in receipt of monetary benefits on the date of passage of the Act and whose right to receive monetary benefits continues under the provisions of rule No. 2 are prohibited from participating in decisions under the Act.

Regulation No. 11. Deals with the disclosure of information and the furnishing of copies of official records. It is substantially in accordance with previously existing law, except that it authorizes the administrator, with the approval of the President, upon determination that the public interest warrants or requires, at any time and in any manner, to publish any or all information of record pertaining to any claim.

Regulation No. 12. Provides a presumption of entitlement to pension for Spanish War veterans now on the rolls and for the widows, children and dependent parents of deceased veterans of the World War are now on the rolls, as of the last day of the month in which such determination is made. It further provides that the Government shall review all of the claims and where it is in a position to rebut the presumption, either on medical judgment or specific evidence, the benefits being paid shall be discontinued.

It is estimated that the savings which will result from the adoption of these regulations is approximately \$400,000,000, and while it is appreciated that many thousands will be adversely affected, no estimate as to exact numbers can be given until the reviews authorized have been accomplished.

SPECIALISM IN MEDICINE *

DR. RAY LYMAN WILBUR, Washington, D. C.: Specialism was an inevitable accompaniment of the advance of modern medicine. On the whole, it has had most wholesome results, both in the care of the sick and in the extension of knowledge.

In the United States it has developed practically free from control. The abuses that were current in the uncontrolled medical education of three or four decades ago are now showing themselves in nearly all the specialties. It was necessary in the control of medical education to obliterate or amalgamate existing teaching institutions, to develop standards for laboratories, hospitals and medical schools, to bring about state legislation controlling the practice of medicine and surgery, and to endeavor to influence through medical societies, social organizations and law the inadequacies of free and untrammelled medical training. In this process of changing and maturing medicine, the American Medical Association, through the Council on Medical Education and Hospitals, has had a dominating influence. . . .

It has been frequent in recent years for self-anointed specialists to present themselves to the public without adequate training and without passing through a well-defined period of preparation. Each man was a law unto himself. Along with this has gone the development of great skill on the part of many individuals in the specialties. Time has shown a sufficient number of difficulties, if not failures, among specialists, to warrant the handling of this question in a way that will not only protect the best interests of the public, but also bring about growth in the training and skill of those who select special fields for their medical work. Specialism is here to stay and to grow.

In approaching the question from the standpoint of the American Medical Association, it seems that we should realize that we cannot wisely disturb specialists who are now established in their profession, nor insist on a specific training for them. Whatever we may wish to do in the way of suggestions for training can apply only to new men. It is, though, well within the function of the Council on Medical Education and Hospitals to set up minimum standards of education for all who are in the future to be recognized as specialists and also to require certain standards for those whose names are to be published in any list of the association. It might be said that this can better be done by certain of the special societies, but it does not seem wise to allow specialism to be controlled by self-controlled organizations often having in their membership certain individuals who make it their function to "freeze out," for personal reasons, men who may be equally qualified. Also, it is not wise to wait until the police power, exercised through licensing, can function so far as the various state boards of licensure are concerned.

Granted that there is an evolution going on in specialties of medicine and that we are in a transition period offering unusual difficulties of control, it seems nevertheless that now is the time to attack the problem and that, so far as the council is concerned, it is within the power of the council, and technically possible, to (1) provide certain minimum standards of education and training for specialists and to list in the American Medical Association Directory, or in some special directory, those whose achievements equal these standards; (2) provide lists of schools or institutions approved for the training of specialists; (3) list hospitals offering residencies or other positions suitable for the training of specialists; (4) come to a decision as to the way in which those who are already

in special fields shall be designated; (5) work out, in conjunction with the Association of American Medical Colleges, the American Hospital Association and the National Board of Examiners and the national societies, constructive plans for dealing with those who plan to enter special fields.

It would be possible also to localize lists of specialists so that they could become available in the different states, cities, and counties. While there are no doubt some difficulties associated with this program, the record of the Council indicates that it is in the best position to speak with the voice of the entire medical profession. Its continuity of policy and personnel, its freedom from professional jealousies and political control, permit it to make impartial judgments. It has available unequaled facilities and established machinery for carrying on its work. The biographic files of the association contain the most complete information anywhere in the country regarding the membership of the medical profession. . . .

The council can proceed without the action of the legislatures and free from outside interference. Its work can be carried on within the profession and can be united with all other constructive forces. We know that the method is effective for it has worked before. Should it be desired, the Council on Medical Education and Hospitals stands ready to carry on work in this new field to the best of its ability.

DISCUSSION

DR. LOUIS B. WILSON, Rochester, Minnesota: Despite the popular publications by inadequately informed economists which have tended to create distrust of the medical profession in the minds of lay readers, there are few laymen who in the event of complicated illness in their own families will attempt unaided to select a specialist. They rightly, for the most part, fall back on the advice of their family physician. . . . We must not forget that approximately four thousand young men and women begin the practice of medicine each year. Most of these have inadequate data on which to make a selection, yet they are the ones who most need consultants and whom it is to the greatest interest of the public and of the profession that they start right.

The essential qualifications which the family physician seeks in a specialist are (a) competence, (b) honesty, and (c) good hospital connections. . . . I believe with Doctor Wilbur that the American Medical Association is the only organization which can bring such information accurately, economically and authoritatively to the medical profession. The American Medical Association is strategically and financially better able to collect and publish economically such a combined list of all specialists than could possibly be done by the several specialty boards themselves. . . .

DR. DEAN LEWIS, Baltimore: . . . One of the main things about this specialty program is informing the public. I think probably the best means of doing that is through the American Medical Association, through the directory. The association has the equipment. It can use special societies. As far as informing the public is concerned, I think this is the best method, through qualifying boards without examining boards. Whether this is ever going to stop the unethical part of practice, I do not know. I never expect to see fee splitting and unethical things in practice rooted out until the highest type of medical profession develops. That is a moral thing. A man ought to know it; if he does not know it I often think he cannot be educated. Sometimes I get a little discouraged about this because a patient picks out a doctor for a lot of different reasons. Whatever qualifications the doctor may have, if he likes the doctor he is going to employ him.

DR. WILLIAM P. WHERRY, Omaha: The symposium this afternoon takes me back seven years to the time when the otolaryngologic board was first contemplated. At that time we constructed several hypothetical premises from which we intended to function. Ex-

* Excerpts from the report by Chairman Wilbur and the discussion thereon, at the February 1933 Annual Congress on Medical Education and Licensure, Chicago. (See also references to specialism in Doctor Wilbur's address, page 338.)

perience, however, has quite completely changed our concepts. We now realize full well that we are not entirely a qualifying board, that we are not an examining board, but we are a board to determine "Is this candidate before us a safe man?" We keep in mind the ultimate object, the patient. "Is he a safe man?" To me that is the keynote of the special board's interpretation of the candidate. That the special boards will enter into graduate instruction, there is no question. It has been appalling to the otolaryngologic board to realize the carelessness with which graduate instruction is carried on. There has been very little supervision. We have realized that in the final analysis a school will be rated by its output, by the graduates. . . .

DR. AUSTIN A. HAYDEN, Chicago: . . . The question of designation of specialists came up before the Chicago Medical Society within the last month. The radiologists asked the council of the society to make a ruling on whether or not the printing of their names in the advertising book of the Chicago Telephone Company, under a specially designated group, known as radiologists with the title of doctor of medicine, would or would not be considered unethical. The society decided that the printing of such a column in the Red Book of the Telephone Company of Chicago would not be considered unethical. These men said that not many of their people came to them through referring physicians and they felt that the general public was entitled to know who were the qualified men in Chicago who were operating x-ray laboratories. That was the answer of our local society, and I believe that it was the correct answer. . . .

DR. RAY LYMAN WILBUR, Washington, D. C.: I should like to say that the council already publishes lists of these specialists, and we publish them whether they are members of the association or not. The data are sent in by the members, and we record that they belong to special societies; if they state they are specialists, we so indicate, whether they are members of the association or not. So while we publish our registry now on a certain basis, we have the responsibility, really, of presenting these lists, but we have not carried out the functions of investigation and organization that should be carried out if those lists are to be fully defended. It is largely a matter of doing a good job instead of the one that is being done now. I think, too, that it can be done without any great amount of expense and be done readily in co-operation with all the organizations involved. I have a very definite opinion that no self-selected, self-appointed society that chooses its members on some basis that it sets up can be allowed in America to determine who shall be a specialist and who shall not. The minute we get into the hands of special societies and they tell us what to do in the medical profession, we have lost the opportunity to grow in American medicine.—*Journal of the American Medical Association*, Vol. 100, No. 14.

SPECIALISM IN VIENNA *

Regulations Concerning Use of the Term

During the deliberations of the Vienna chamber of physicians, last year, Doctor Sonnenfeld presented a communication in which he explained the present regulations concerning the assumption by physicians in Austria of the title of "specialist." At present there are no legal regulations bearing on the right to assume and use the title of specialist in the republic of Austria. Only with regard to the admission of physicians to the *kranken-kassen* having free choice of physician has any regulation of the specialist problem been at-

tempted. As affecting the contracts between the organization of the medical profession and the *kranken-kassen*, the following regulation obtains: "Only such physicians who, following a special course of training, confine their practice to a special branch of medicine are entitled, in principle, to announce themselves as specialists. Such physicians are recognized by the economic organization of physicians as specialists and are announced to the *kranken-kassen* expressly as specialists for a certain branch of medicine. They are not permitted to serve, at the same time, as general practitioners." Every specialist must be a member of the Verband der Fachärzte (league of specialists) in Vienna if he wishes to practice in Vienna. In the provinces outside Vienna the title "specialist" is approved, by the chamber of physicians having jurisdiction, only after the applicant has furnished evidence of his special training. The special training required has been standardized by the Verband der Fachärzte in the following manner: A specialist can practice in only one of the following fields: surgery, dermatology, gynecology (including obstetrics), internal medicine, respiratory organs, neurology and psychiatry, ophthalmology, orthopedics, otorhinolaryngology, pediatrics, physical therapy, roentgenology, urology and medical laboratories, or a total of fourteen specialties. That holds for Vienna; in the provinces the three specialties, orthopedics, urology and medical laboratories drop out. In case of need, the chamber of physicians has the right to combine two or more specialties (internal medicine and pediatrics, and respiratory organs, or ophthalmology and otorhinolaryngology, or surgery with gynecology and radiology). Every specialist in Vienna or in the provinces must first request admission to the narrower group and furnish proof that he has fulfilled the conditions for admission as specialist, which, for the non-operative branches, are at least four years of training in a clinic or hospital service dealing with his specialty, and, for the operative specialties, five years of training and experience in such an institution. The applicant must also furnish proof that, for at least two years of the four to five-year period, he served as assistant to the department head and was thus compelled to work more or less independently. The applicant is not recognized by the Verband der Fachärzte until the group of specialists concerned has admitted him; he can then enter into contracts with the health insurance societies (*kranken-kassen*). But in case a physician does not seek service with the *kranken-kassen*, he can select any specialty he desires, specialize in that branch of medicine, and announce himself as a specialist in that branch; and, if he desires, he can practice also general medicine, which the members of the specialist groups are strictly prohibited from doing, as has already been mentioned. But he cannot be admitted to membership in the Verband der Fachärzte. It should be noted, however, that the general public has become so used to regard and patronize only the members of the Verband der Fachärzte as specialists that the other specialists receive little consideration. The only specialist title that is protected by law in Austria is that of *zahnärzt*, (physician-dentist), since the study of dentistry is regulated by law and only doctors of general medicine who devote themselves exclusively to dentistry may call themselves *zahnarzt*, other persons ("dentisten," technicians, and others) not being permitted to refer to themselves as *zahnärzte*. In Vienna there are something over 4,000 registered physicians, for a population of 1,810,000. Of that number, 800 are hospital physicians, 1,220 specialists, 650 physician-dentists (*zahnärzte*), and the remainder (about 1,400) general practitioners, 290 of whom are women. Among the specialists and physician-dentists there are 110 women. In Austria, outside Vienna, there are about 2,600 registered physicians, with about 600 specialists and physician-dentists.

* Vienna correspondence in *Journal of the American Medical Association*, Volume 98, Number 9.

TWENTY-FIVE YEARS AGO*

EXCERPTS FROM OUR STATE MEDICAL JOURNAL

Vol. VI, No. 5, May, 1908

From some editorial notes:

Coronado Meeting.—The thirty-eighth annual meeting of the Medical Society of the State of California, just held at Coronado, was a notable one and eminently successful. Seldom has a meeting been held that more completely marked good feeling and good fellowship, with a total absence of all bickerings and petty squabbles. . . .

The New Officers.—As provided by the constitution, the election of officers was taken up by the House of Delegates as the first order of business at the second session Wednesday, April 22. San Jose and Del Monte were nominated for the next annual meeting, and the former place chosen by a large vote. Dr. Joseph M. King of Los Angeles then nominated Dr. W. W. Beckett of Los Angeles for president. The nomination was seconded by Dr. F. Dudley Tait of San Francisco, and as there were no other nominations, the secretary was instructed to cast the ballot of the House of Delegates for Doctor Beckett for president for the ensuing year. . . .

From an article on "Report of the Pure Food Commission" by F. C. E. Mattison, M. D., Chairman.

The Pure Food Commission was a special committee of our society authorized by the House of Delegates and Council at the 1907 meeting at Del Monte, and consists of five members appointed by the president of the society. . . .

As already stated, we believe the name a misnomer, and recommend that this committee be known instead as the Public Health Commission of our society. We trust, also, that the work it is designed to take up will lead you to continue this commission as one of your committees.

From an article on "Fourth Annual Report of the Tuberculosis Committee" by F. M. Pottenger, M. D., Chairman.

There has at last been organized in California a State Association for the Study and Prevention of Tuberculosis. A local organization is also in the process of formation in San Francisco, and the subject of the prevention of tuberculosis has been brought before many localities throughout the state during the past year by public lectures, some of which were under the direct auspices of our committee. . . .

From an article on "Report of the Committee on Medical Education" by F. Dudley Tait, M. D., Chairman.

The dominant note in medical education matters in California during the past year is the Association of American Medical Colleges' standard of requirements to the strict enforcement of which California owes its foremost position among the states as well as its controversies in the legislature, in the courts, and with medical colleges. . . .

From an article on "Report of the President to the House of Delegates" by George H. Evans, M. D.

It is the function of county societies to educate the laity on many of the large problems of state medicine, and to this end public meetings should be frequently held. If we are to be consistent exponents of preventive medicine, then we must instruct the layman on these matters of which he is so ignorant. . . .

* This column strives to mirror the work and aims of colleagues who bore the brunt of society work some twenty-five years ago. It is hoped that such presentation will be of interest to both old and recent members.

(Continued on Advertising Page 17, front section)

BOARD OF MEDICAL EXAMINERS OF THE STATE OF CALIFORNIA*

Results of Board of Medical Examiners Examination

Charles B. Pinkham, M. D., Secretary-Treasurer of the Board of Medical Examiners of the State of California, reports results of the written examination held in Los Angeles, February 28 to March 2, 1933. The examination covered nine subjects, and included ninety questions for physician and surgeon applicants. An average of 75 per cent is required to pass. An allowance of 1 per cent added to the general average is allowed by the Medical Practice Act for each year of medical practice under a license granted elsewhere than in California, provided the applicant has not fallen below 60 per cent in more than one subject.

Sixty-four applicants wrote the examination, all being graduates of medical schools.

Among the examinees were graduates of extra-state medical schools, including Austria, Canada, Germany, Italy, and Russia.

The following colleges were represented:

College	PASSED	Year of Graduation	Per Cent
College of Medical Evangelists.....	1932	88 5/9, 83 4/9	79 2/9
Cornell	1931	83 8/9	
Creighton University.....	1932	82 1/9	
George Washington University.....	1932	83, 83 2/9	
Howard University.....	1931	85	
Indiana University.....	1932	80 6/9	
Jefferson Medical College.....	1928	79 1/9	
McGill University Faculty of Medicine, Canada	1924	83 6/9	
	1927	81 2/9	
	1932	82 5/9	
Northwestern	1932	87 6/9, 79 8/9	
	83 8/9, 78 4/9, 79 4/9		
Rush	1928	79 1/9	
	1931	85 8/9	
	1932	76 1/9	
St. Louis University.....	1932	81 7/9, 80 4/9	
		80 8/9	
Stanford University.....	1932	88 1/9	
State University of Iowa.....	1932	82 7/9	
Temple University.....	1932	83 5/9, 83 6/9	
	78 2/9, 78 4/9, 80 6/9, 76		
University of California.....	1932	85 8/9	
University of Colorado.....	1931	81 4/9	
	1932	80, 81 4/9	
University of Illinois.....	1906	89	
University of Michigan.....	1931	84 8/9	
	1932	81 1/9	
University of Minnesota.....	1932	80 6/9	
University of Nebraska.....	1932	82 5/9	
University of Oregon.....	1932	80 1/9, 84 7/9	
	83 6/9, 83,	81 7/9, 79 4/9	
University of Tennessee.....	1931	85 3/9	
University of Texas.....	1932	83 6/9	
University of Wisconsin.....	1932	84 6/9, 79 6/9	
		85 4/9	
Washington University.....	1931	88	
Woman's Medical College of Pa.....	1932	83 5/9	
Yale University.....	1931	81 8/9, 84 3/9	

College	Year of Graduation	Per Cent
Carl-Francis University, Austria.....	1928	65 5/9
Laval University, Quebec, Canada.....	1912	62 5/9
Northwestern	1932	72
Psycho-Neurological Institute Medical College, Russia.....	1917	69 7/9
Royal University of Rome, Italy.....	1928	58 1/9
University of Charkov, Russia.....	1924	66 6-9
University of Greifswald, Germany.....	1920	70 3/9
University of Illinois.....	1931	71 5/9

LIST OF SUCCESSFUL APPLICANTS

The following is a list of the successful applicants:

Carroll Baugh Andrews, San Leandro.
Robert Van Batterton, San Diego.
Ralph Arthur Behrend, Los Angeles.
Ronald Earl Brown, Saskatchewan, Canada.
Jacob Harold Cantarow, Los Angeles.
Willard Wayland Carey, Modesto.
Harold Robert Carter, Santa Barbara.
Albert Stillman Chase, Glendale.

* The office addresses of the California State Board of Medical Examiners are printed in the roster on advertising page 6.

(Continued on Advertising Page 18, front section)

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LIVING GRAFTS OF ENDOCRINE GLANDS*

By HARVEY B. STONE, M. D.
JAMES C. OWINGS, M. D.

AND

GEORGE O. GEY, B. S.
Baltimore, Maryland

I

AT present perhaps no field in medicine is the focus of greater interest than that known as endocrinology. General medicine and general surgery concern themselves actively with the study and treatment of disorders of the thyroid, the parathyroids, the islands of Langerhans, the hypophysis, and the more recently investigated adrenals. The subdivisions of clinical medicine are all touched to some extent by the ramifications of the general subject of endocrinology. Just now workers in obstetrics and gynecology are so successful in describing new hormones of conflicting or coöperating properties that one not closely engaged in these particular branches is more than a little bewildered. To keep pace with the terminology alone is no simple matter for an outsider. We find the brain surgeon, the urologist, and the gynecologist each depicting a nearly identical clinical state of general constitutional disturbance with changes of sexual characteristics and metabolism, but the first attributes this to tumor of the hypophysis, the second to tumor of the adrenal, and the third to tumor of the ovary. Not only clinical medicine, but the allied sciences are busily engaged. Pathology has furnished us with descriptions of the lesions of the organs concerned, and physiology has revealed much of their functions—the foundation on which rest our clinical conceptions. By no means least remarkable has been the contribution of biological chemistry, for surely epinephrin, thyroxin, insulin, cortin, and parathormone rank among the major achievements of recent times in the medical sciences. We are even told that characters, personality, and various other less tangible qualities depend upon the glands of internal secretion. In fact, we have been told so much, and much of it so evidently based largely on imaginative theory, not to say romance, that the more conservative are inclined to view the

whole subject of endocrinology with a certain judicious reserve. But making all allowance for overenthusiasm in a rapidly expanding and rather "miraculous" field, the solid and indisputable advance has been nothing less than monumental. When one recalls that until the work of Claude Bernard¹ only faint glimmerings of the real nature of internal secretion existed, and contrasts this with the practical results now attained in such common disorders as goiter and diabetes, there emerges a sharp realization of the important progress thus far attained. For the purpose of this paper, it may be well to direct further attention to the nature of this progress.

SOME BASIC GENERAL KNOWLEDGE

Certain general ideas are easily recognizable as basic in all the firmly established knowledge of the glands of internal secretion. These may be briefly stated as follows, and need no elaboration. First, the products of these glands, the hormones or internal secretions, are essential to life, even though their actual quantity may be relatively very small. Second, an excess in amount or perversion in quality of the secretion causes marked changes in general bodily function; these changes are characteristic for the particular gland concerned, as a rule; and are in some cases measurable by definite chemical and physical tests. Third, a deficiency of secretion, not so profound as to be promptly fatal, also causes marked and characteristic changes in bodily function which are more or less the antithesis of those that go with excessive secretion. From the viewpoint of clinical medicine, these basic ideas find their application in the two great fields of diagnosis and treatment. A most interesting historical survey might be made of the way in which clinical states, well recognized and described before endocrinology existed even as a name, have since come to be understood as manifestations of disorders of the glands of internal secretion. One thinks of Graves' disease, of Addison's disease, of acromegaly, of diabetes, of Paget's disease of the bones—and in passing salutes the powers of observation and synthesis of the great clinicians who drew from obscurity a sharp picture of a disease entity. But it is particularly with problems of treatment that we wish to concern ourselves in this paper, and we proceed to consider the general lines along which these problems have been attacked.

* From the Surgical Hunterian and Surgical Pathology Laboratories, department of surgery, Johns Hopkins University.

* Guest speaker paper read before the general meeting of the California Medical Association, at the sixty-second annual session, Del Monte, April 24-27, 1933.

TWO GROUPS OF ENDOCRINE GLAND DISORDERS

It is clear from what has just been said—a matter of common general knowledge—that disorders of the endocrine glands fall readily into two groups, the disorders of excess and those of deficiency. Of the first group the outstanding familiar example is toxic goiter; of the second, diabetes. Likewise the principles of treatment obviously are divisible into two corresponding groups, if one leaves out of consideration for this discussion the palliative, indirect, and supportive treatments that do not directly attack the root of the trouble. For the disorders of excessive secretion the direct treatment is aimed at the destruction of enough of the gland concerned to bring back its production of secretion within normal limits, but with care to preserve sufficient tissue for proper function. The usual method of attaining this purpose is surgical removal of the offending structure, although other destructive agencies, such as radiation, have been used for the same end. The story of the operative treatment of goiter illustrates well how the surgery of endocrine excess has evolved, and it has been told in unsurpassable manner by Halsted.² The lessons learned on this particular gland of internal secretion are being widely applied to similar problems in other glands. The hypophysis has its story, too, and the stories of the parathyroid, of the adrenal, and of the gonads considered as glands of internal secretion, are being busily written now. There will undoubtedly be much to learn. In some cases improvements of approach and technique, in others of preparation and extent of removal. It may be said safely, however, that the principle of treatment for disorders of excessive glandular activity is established.

A PRINCIPLE IN USE IN INTERNAL SECRETION DEFICIENCIES

There has been developed also a principle for dealing with deficiency of internal secretion. That principle is the discovery, through chemical investigation, of the active principle lacking, and its administration to make good the lack. Here we enter a very recent and very dramatic field of development. Insulin, parathormone, and cortin are fresh in the minds of everyone as great discoveries almost of yesterday, and constant work is being done along similar lines with other important organs of internal secretion. These advances have prolonged lives and relieved suffering in a way that was quite impossible ten years ago, and the field is still a large and fertile one for further cultivation. Great as these achievements are, however, and richly as they deserve the gratitude and appreciation of all mankind, they yet fall short of the ideal. For it is obvious that any method requiring the constant administration from without the body of substances essential to its welfare, that are normally produced within it, lacks much of being a satisfactory arrangement. The ideal, the goal clearly before us is to restore to the body the power to form its own necessary internal secretion. This brings us, after perhaps too long an approach, to the direct purpose of this paper.

We have undertaken to graft into animals living endocrine tissues in the hope of providing a better method of treatment of the deficiency disorders of the glands of internal secretion, and this paper is a preliminary report of that work.

LIVING GRAFTS OF ENDOCRINE GLANDS

The problem has not been attacked without some understanding of its difficulties or some knowledge of the many previous attempts that have been made in the same direction. It has been generally accepted that it is nearly impossible to succeed in grafting living tissue from one animal to another. Perhaps the most frequent and most ancient effort in this general field has concerned skin grafting. In this particular form of cross grafting, as elsewhere, it is the consensus of opinion that the grafts do not survive even when special measures, such as matching the blood of donor and recipient are observed. Holman³ has reported on this. A few optimists, however, like J. Staige Davis, with his great experience of plastic surgery, believe that in rare instances such grafts do survive. We shall not discuss the many efforts that have been made to cross graft living bone, fascia, nerve, etc., nor the almost uniform failure that has been reported. We do wish, however, to deal briefly with some of the problems and difficulties that are involved. It is clear that certain conditions are essential to success of the graft. The most important of those known are the securing of a prompt and adequate blood supply to the graft, the avoidance of strangulation by surrounding tissues, especially scar, and the provision of chemical affinity, in its broadest sense, between the graft and the host tissues. There may be many other factors of which we are entirely ignorant.

CROSS GRAFTING

The problem of cross grafting endocrine tissue is in one respect much simpler than grafting bone, tendon, or nerve. In the case of the endocrine glands the essential element is the individual cell with its peculiar secretory properties, whereas in the other instances not only the living cell but features of structural arrangement and architecture are important. Attempts at transplantation of glands of internal secretion are not new. Halsted,⁴ in particular, made extensive experiments in this field. He was interested particularly in the thyroid and parathyroid, and reported that he was never able to succeed in transplanting parathyroid tissue from one animal into another. In several instances he proved that he had transplanted functioning parathyroids to new sites in the same animal, but only after he had created a deficiency of parathyroid by previous removal of some of the glands. It was upon this work that he suggested his well known "law of deficiency," namely, that for the graft of an endocrine gland to be successful, the animal must be in physiologic need of the gland because of a created deficiency. It has been assumed rather generally that Halsted definitely proved this thesis and it is accepted as established. As a matter of fact, it was merely

a suggestion made by him with the specific statement that further work would be required to prove it. We shall make reference to this matter again later. This situation was one of the impelling influences that led to our own studies, for the demonstration by Halsted of at least a measure of success in autotransplantation of parathyroids encouraged hope, and we were impressed by two further considerations. One of these was the importance of the fact noted above that survival of even fragments of glands would be adequate and the other was the help that might be gained from the teachings and experiences of those who have cultured tissues for long periods of time *in vitro*. As we interpreted these teachings, it seemed that the essential conditions were as follows: the tissue must be surrounded by a particularly suitable nutrient medium; it must be maintained in such small fragments that most of the cells can come into direct and intimate contact with this medium, for here there is no circulation; and finally, the fragments must be free from pressure and protected from infection.

(To be concluded)

PROSTATIC OBSTRUCTION—DEVELOPMENT OF ITS SURGICAL TREATMENT*

By HERMON C. BUMPUS, JR., M. D.
Rochester, Minnesota

I

BECAUSE the distressing symptoms of prostatism so frequently interfere with the pursuit of happiness in later life the physician has always entertained a keen personal as well as professional interest in the disease. The subject seems particularly fitting for review this year, as it is the centenary of the first efforts by Guthrie to correct prostatic obstruction through the urethra, and from all indications this year will witness the general abandonment of prostatectomy, either perineal or suprapubic, for some method of transurethral treatment. As now practiced the transurethral procedure gives relief of symptoms without incurring the risk of major surgery, avoids prolonged hospitalization, and is not followed by distressing evidences of dysfunction such as incontinence, persisting urinary fistulas and other unfortunate sequels so frequently seen after prostatectomy.

EARLY HISTORICAL REFERENCES

In tracing the development of the surgical treatment of prostatism one must turn back to the seventeenth century when, as those who have perused Pepy's Diary will recall, "cutting for stone" was an accepted surgical procedure. During the next century adventurous surgeons occasionally attempted the same operation for the relief of urinary obstruction, even when the metallic sound did not elicit the click characteristic

of the presence of a calculus. In 1809 Blizzard¹⁴ was able to report a series of cases of urinary obstruction from prostatic hypertrophy which were relieved by this operation. Such leaders in surgery as Fergusson considered it the accepted method of treatment when the catheter had failed.

Home, in 1811, published an essay entitled "Practical Observations on the Treatment of the Diseases of the Prostate Gland." He described hypertrophy of the posterior commissure so accurately that Randall has recently suggested that the term "Home's lobe" be applied to this pathologic entity in place of "median lobe," because the latter term tends to confound the changes brought about by hyperplasia with those produced by atrophy and commonly referred to as median bar.

MEDIAN BAR OBSTRUCTION

Median bar. This variety of urinary obstruction was first called "median bar formation" by Guthrie in 1834, and although other terms have been suggested, such as "contracture of the vesical neck," "sclerosis of the internal sphincter," and "fibrosis of the vesical orifice," there seems to be no good reason to depart from the original terminology if we keep its pathology clear in our minds. Randall, who has carefully studied the pathologic changes of the prostate gland, described the condition as: "Fibrosis which by its inevitable shrinkage stenosis of the bladder orifice produces residual urine and gives all the symptoms of prostatism. All evidence points to this fibrosis being the result of long-standing prostatic infection, and there is no evidence to gainsay such as the probable etiologic factor." Because the symptoms of such obstruction are frequently identical with those produced by hyperplasia, the term "prostatism sans prostate" had been applied.

The median bar, of course, offers the best type of case to treat by some form of incision carried out through the urethra, and until recently many eminent urologists regarded it as the sole variety of urethral obstruction for which correction by the transurethral route was suitable. Guthrie was the first to make such an attempt, and in a paper read before the Royal College of Surgeons in 1834, he described division of the obstructing bar at the neck of the bladder by incising it with a knife-blade hidden in the eye of a catheter, in much the same way that internal urethrotomy was performed some years later. He believed that the bar was the result of tautening of the mucous membrane between the hypertrophic lateral lobes. A procedure for correcting such obstruction has been brought to full perfection in recent years by Collings of New York, who employs a high frequency cutting current in conjunction with a small, hooked platinum knife, and a more accurate procedure is hard to imagine. In the absence of hyperplasia only small amounts of tissue require excision.

Mercier, in 1837, devised two instruments called at the time by Gouley "prostatotome" and "prostatectome" for transurethral correction of prostatic obstruction. The first instrument accomplished

* From the Section on Urology, The Mayo Clinic, Rochester, Minnesota.

* Stanley P. Black Memorial Lecture, Pasadena, California, January 16, 1933.

the same purpose as Guthrie's, serving merely to divide obstructing bands, and was to all intents and purposes a sphincterotome. The second resembled the instrument introduced to the profession by Young in 1911, and since known as a punch. It enabled the operator actually to remove portions of the obstructing tissue, but as it made no provision for either vision or hemostasis, its field of applicability was naturally somewhat limited, although its inventor is credited with having employed it with success in several hundred cases.

MEDIAN LOBE OBSTRUCTION

Median lobe. The variety of obstruction best suited for removal by an instrument of this type is the so-called middle lobe described by Home. Such lobes are of two kinds, both due to glandular hyperplasia. In the more common kind the hyperplasia has occurred in the commissural tissue situated just beneath the trigonal muscle. Its enlargement leads to compensatory hypertrophy of the muscle which results in still greater obstruction to the vesical outlet. In the second type the hyperplasia occurs in the subcervical group of glands, particularly those of Albarran, which, being above the trigonal muscle and of submucous origin, frequently produces a ball-valve type of obstruction. Transurethral removal of the obstruction produces at once the most astonishing symptomatic relief. Brilliant results having been obtained occasionally by the Mercier prostatectome, Bottini,¹⁴ of Pavia, attempted to extend the application of transurethral methods by the use of the galvanocautery. He constructed an instrument resembling a lithotrite, the male blade of which consisted of an electric cautery. In manipulating the mechanism the obstructing prostatic tissue played the part of the stone in the procedure of lithotripsy. A cooling current of water passing through the female blade prevented undue heating of the instrument. Strangely enough Bottini did not exploit his instrument, and it was little known outside of Italy until it was popularized by Freudenberg of Berlin. Freudenberg becoming an adept in its use, sailed for New York in 1897, where he operated on a number of patients, and persuaded Willy Meyer¹⁴ of its virtues, and Meyer was the first American surgeon to use it.

When the symptoms of urinary obstruction were due to a median bar or to hypertrophy of the median lobe, results were usually favorable. Unfortunately the most common hyperplasia of the prostate gland occurs in the two lateral lobes and in these cases such an instrument can be of little benefit, especially when it must be applied without vision.

LATERAL LOBE HYPERTROPHY

Hypertrophy of the lateral lobe. When glandular hyperplasia is confined to the lateral lobes, urinary obstruction occurs from their contact with each other. No intravesical enlargement occurs unless there is associated hyperplasia of the commissural portion of the gland, the so-called median lobe. When this occurs it dilates the internal

sphincter sufficiently to allow the hypertrophic lateral lobes to extend intravesically, in which case the lobulated masses are frequently difficult to distinguish from the median lobe. A sulcus usually develops between them and the median enlargement, and through this trough the urine in the bladder may satisfactorily escape. This type of hypertrophy represents cases in which physical signs from rectal palpation indicate extensive hyperplasia, but residual urine is absent or small in amount.

Any transurethral instrument not manipulated under vision is prone to fall into such a groove, and with Bottini's lithotrite-like blades the resultant destruction of tissue was usually followed by extravasation of urine and fatal sepsis, so that the instrument came into ill repute. Wassidol of Berlin attempted to overcome this lack of vision by adding a system of lenses much as is done in the case of some of the modern lithotrites. His instrument did not prove successful, but it did bestow on its inventor the distinction of being the first to attempt to bring transurethral surgery under vision. Freudenberg later tried a similar although slightly different instrument, but he admitted in his writings that the lens system was a failure and he preferred to proceed by sense of touch.

SUPRAPUBIC SURGERY

Suprapubic surgery. Although Bottini described his instrument in 1876, it was not until twenty years later that Freudenberg made his trip to America. During the intervening years there had been rapid development of suprapubic surgery. The operation of suprapubic cystostomy for the relief of urinary obstruction had been described by Rossetus¹⁴ as early as 1590, but because of its greater mortality had never been as popular as perineal section. Yet after the discovery of anesthesia it was more generally practiced, so that to form a suprapubic fistula for the relief of obstruction from prostatic hypertrophy was an accepted procedure when catheterization became impossible. As it was invariably performed as a last resort, often on patients in the terminal stage of uremia, it had a high mortality. In spite of this fact von Dittel was a strong advocate of the procedure, although he acknowledged 160 fatalities associated with its performance. In 1885 he reported that he dilated the fistula of one of his more fortunate patients, who had survived the cystostomy, and that he was able to tear out prostatic lobes protruding into the bladder. One wonders that the urge to tear out or excise the lobulated portions of prostate gland had been resisted so long by those who practiced suprapubic cystostomy, for, once von Dittel had shown the way, others promptly adopted the procedure.

In May of the next year, Trendelenburg¹⁴ tried the operation and was followed by Schmidt¹⁴ in August, and Belfield in October. Belfield was the first to report his work in print. As von Dittel had not performed an operation in one stage, Belfield during his life considered himself the first

surgeon to have performed a suprapubic prostatectomy. In the year of Belfield's report, McGill of Leeds, England, performed his first operation for the removal of obstructing portions of the prostate gland by this approach, and so convincingly persuaded the profession of its advantages that he has been considered by Europeans as the father of the suprapubic operation.

At first the suprapubic operation consisted in removing with forceps or by excision that part of the gland which extended visibly into the bladder, but during the next ten years the pioneers in this field became more bold, and it was not long before Fuller, in New York, and Freyer, in England, were each advocating what they both considered complete enucleation of the gland by this route. The earlier procedures had given relief of obstruction if the excised tissue had happened to be an enlarged middle lobe without intra-urethral hypertrophy of the lateral lobes, but frequently the mass which was visible in the bladder did not happen to be the part which was obstructing the urine, and as a result the symptoms were not relieved. By the procedure of Freyer and Fuller the obstructing tissue, together with a large amount of nonobstructing tissue, was removed, and the functional results were immediately improved, but the mortality was not lowered. As a result, urologic surgeons the world over at once undertook to institute methods for the reduction of this mortality. This effort at first took the form of a dispute that was to last for a generation as to the relative merits of the suprapubic and perineal operation. The latter operation had been a logical development from perineal section and prostatotomy, and had been used by Küchler¹⁴ in 1866 for the treatment of carcinoma of the prostate gland. Its varied techniques were well established before McGill popularized the suprapubic method.

Neither the advocates of the perineal route nor those favoring the suprapubic approach seemed to sense the illogical basis of a procedure which compelled the enucleation of large masses of nonobstructing benign tissue in order to remove what in many cases amounted to only two or three grams of obstructing tissue. It might be compared with the performance of a posterior Kraske resection of the rectum in order to remove an obstructing polyp.

PRELIMINARY TREATMENT

Catheter Drainage.

In this effort at the reduction of mortality, one of the earliest discoveries was the advantage of preliminary drainage, and in an article entitled "Drainage of the Bladder Through a Catheter in the Urethra" by Cabot,⁷ in 1899, are laid down clearly and concisely all the principles underlying this form of preparation prior to operation. So excellent is the exposition that I shall quote from the article: "It is often surprising to see how quickly the character of the urine changes for the better under this treatment. Let us take now an even more serious case, in which the obstruction in the prostate has led to a dilatation of the

ureters and the pelves of the kidneys. With this condition is usually associated a more or less pronounced degree of interstitial nephritis and a consequent interference with the excretory function. The urine under these circumstances is abundant but of low specific gravity. An inflammation which starts in the bladder of such a patient quickly extends up the dilated ureters to set up a pyelitis, and if relief is not afforded the substance of the kidney is presently affected and a pyelonephritis is the result. It may be readily believed that a provision for the constant escape of the urine as fast as it reaches the bladder will do much to hinder or prevent this backward extension of the inflammation, and experience justifies this belief." Thirty-four years of clinical experience and research have done little but confirm that trite observation, as far as the advantages of a catheter in the case of infections are concerned, but much has been learned regarding its advantages in respect to elimination. Until there is an unobstructed outlet it is apparent that intake as well as output of fluid must be limited, but once the outlet is rendered constantly open and unobstructed by the use of a catheter the intake of fluid can at once be increased and opportunity for the better elimination of retained toxic substances can be realized.

Water Intake.

Provided there is no serious cardiac decompensation, fluids can be forced through the renal filter to its utmost capacity, for the volume of fluid excreted measures roughly the possibilities for elimination of retained toxic substances. Even when the renal injury is so great as to yield but a trace of phthalein and the content of urea in the blood is measured in hundreds of milligrams, it is surprising how rapidly the amount of urea can be reduced if the output of fluid is sustained by sufficient intake.

When these important facts were first being discovered, the intake of fluid was confined to administration by mouth. Debilitated elderly men in the early stages of uremia frequently have what amounts almost to a distaste for water, especially if it is urged on them in far greater amounts than they are accustomed to take. In fact, the work of Rowntree on water intoxication goes to show that ingestion of excessive water by mouth may cause serious injury.

For this reason the forcing of fluids by mouth in these patients was abandoned early, and subcutaneous saline injections were substituted when higher output of fluid was essential. This form of therapy, although possibly excusable in desperate cases, can safely be termed cruel, if not inhumane, for the absorption of fluid from beneath the skin is slow, and certain apparatus employed for its injection causes painful distention of the tissue if absorption is not sufficiently rapid. Today intravenous administration has replaced the subcutaneous method, and in the space of twenty minutes to half an hour as much fluid as formerly required several hours can be administered without discomfort to the patient.

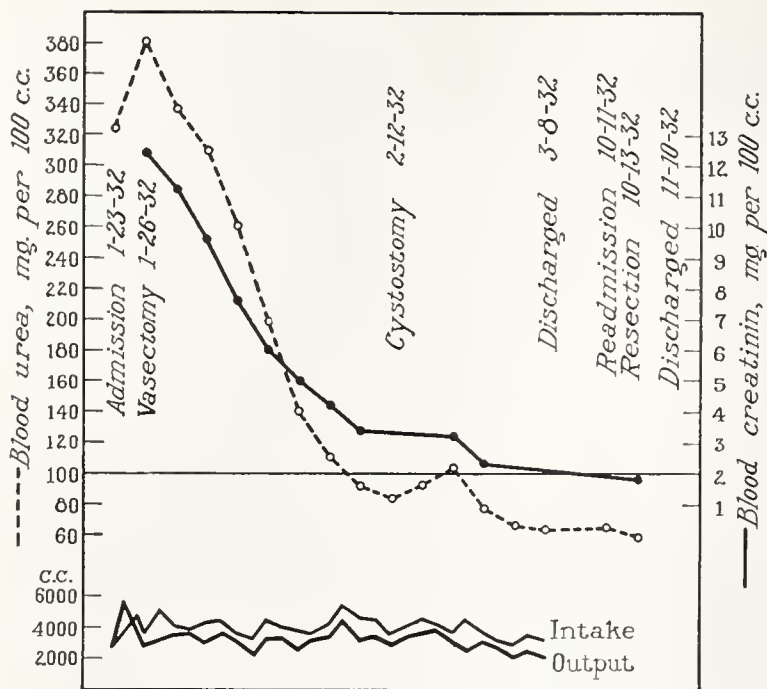


Fig. 1.—Decrease in values for blood urea and creatinin following preliminary drainage of the bladder and forced intake of fluids.

Although the excessive ingestion of water by mouth may be injurious, no such effect has been demonstrated when it is given directly into the vein in the form of saline, either in animals or man. Hence in patients with severe renal impairment and high toxic retention, the aim is now to maintain the intake of fluid somewhat in excess of the urinary output and, as this increases, to increase the intake, if the amount of urea is above normal, until the return of urine in twenty-four hours becomes approximately 4,000 cubic centimeters. When the amount of urea has returned to normal, then an output of 2,500 cubic centimeters is maintained. I have never seen any untoward effects produced by this drastic administration of fluids, provided there was no serious cardiac lesion. The occurrence of edema in the ankles, of course, indicates that the limits of elimination have been exceeded for the time being and in desperate cases has always seemed to be a sign of careful treatment, and not an occasion for criticism.

Phenolsulphonphthalein Test.

Formerly it was necessary to measure progress by a careful examination of the tongue, by the feel of the skin, and by the glistening of the conjunctiva. The only laboratory test available was the specific gravity of the urine, and in severe cases one never felt justified in withholding fluids to see if the kidney was capable of concentration. With the introduction of the phenolsulphonphthalein test a decided advance was made, for immediately one could, by saving the urine excreted at half-hour intervals, ascertain which way the curve of excretion went. If the most dye was excreted in the first half-hour and diminished in the subsequent periods, one knew that renal function was good, but if only a trace appeared at first and was followed by increasing amounts at each subsequent period, one knew equally well that there was renal injury even if the total two-hour collection

was identical in each case. The chemical tests of retention, such as those for blood urea, nonprotein nitrogen, creatinin, and so forth, added further to the accuracy of determining what was being accomplished by elimination so that the necessity for greater speed in elimination could more accurately be determined.

Following the procedure described we were able recently to reduce a content of urea of 380 milligrams in each 100 cubic centimeters of blood, and creatinin of 12.4 in each 100 cubic centimeters of blood to a point sufficiently low to permit of cystostomy (Fig. 1). A few months later the urea content of the blood becoming fixed at 62, transurethral resection was performed, and before dismissal the urea content of the blood was still further reduced. In several cases we have observed that the urea content of the blood became stationary after preliminary suprapubic drainage, and immediately after transurethral removal of the prostatic obstruction the urea content was still further diminished, although it

had previously remained stationary for several months. In the last six years, suprapubic cystostomy for drainage has been performed prior to transurethral resection in eighty-eight (17.63 per cent) of the cases. Such cases I am sure could not have been brought to a successful conclusion with complete restoration of normal vesical function without the important factor of adequate pre-operative drainage.

Drainage.

Because drainage so obviously improved the condition of patients with impaired renal function and excessive infection of the urinary tract, it has been assumed by many that all patients suffering with urinary obstruction from prostatic hypertrophy should be subjected to a course of such treatment before operation. This conclusion I have long considered erroneous, and that urethral drainage prior to operation is inapplicable to patients with normal renal function and reasonable freedom from infection. The subjection of such patients to a period of drainage by catheter not only fails of justification on hypothetical grounds, but can be shown to be actually injurious. When such is practiced as a routine, it will be noted that on the fifth to seventh day after the insertion of the catheter a marked febrile reaction frequently occurs, with all the clinical signs and symptoms of more or less severe pyelonephritis. If the patient's urine has previously been free of infection it will now be loaded with pus, and if the tests with phenolsulphonphthalein previously have shown a normal output, those now taken will frequently reveal varying degrees of impairment. After such an attack the patient is obviously a much poorer surgical risk than before. His appetite is gone, he has lost weight, and his general appearance is not as vigorous or as robust as before. Those who advocate this line of treatment assure us that our eyes deceive us, that the patient has now been

vaccinated, and in spite of his loss of bodily vigor, weight and general sense of well-being, is a much better risk than before drainage.

A little thought will, I think, show what has occurred. The prostate gland, as we know from microscopic studies of its secretion, is seldom free from some degree of infection after middle age, and in a gland that is producing urinary obstruction such infection is likely to be more pronounced. When a catheter is placed permanently in the prostatic urethra it is bound to aggravate rather than diminish the infection. If there is considerable cystitis, the removal of residual urine by the catheter, of course, will more than offset, temporarily, the irritation produced by it in the urethra, as has been clearly described by Cabot.⁷ In the patient with uninfected urine, however, such an advantage is lost, and only untoward results can be expected, for having activated what was a chronic prostatic infection before, the procedure has accomplished all that it is possible to do to make the infection more virulent at the time of operation. With improvement in surgical technique and the tests of renal and cardiac function, deaths from prostatectomy are now seldom the result of uremia, hemorrhage, or cardiac failure, but usually occur from infection. The routine use of a urethral catheter for preliminary drainage would seem to favor rather than retard postoperative infection.

Indwelling Urethral Catheters.

Cabot and Meland recently made a survey of 700 patients prepared for prostatectomy at The Mayo Clinic by indwelling urethral catheters during 1926, 1927, and 1928. From this group they excluded all patients who had fever which might be attributed to epididymitis, cystoscopic examination, or pulmonary complications, or who had fever when first admitted. This left a group of 140 patients in whom fever developed during drainage with a urethral catheter. Their report reads: "Divided into three groups, there were forty-six patients with 100 cubic centimeters or less of residual urine. In these fever developed on the average on the fifth day, and was of six and a half days' duration. In twenty-six of the cases renal function showed a moderate or marked decline. In seventeen there was no notable change, and in two there was improvement. In the group with 100 or 300 cubic centimeters of residual urine, comprising forty-two patients, the average time of onset of fever was five and a half days, duration seven days. Fifteen patients showed moderate or marked decline in renal function, eighteen showed no decline, and seven showed improvement. In the group with 300 cubic centimeters of residual urine to complete retention (fifty-two patients), the average time of onset of the fever was five days, and the average duration was nine days. Twenty-two patients showed moderate or marked decline, two showed no change, and twenty-one showed improvement."

(To be concluded)

ACUTE ABDOMINAL PAIN

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ALTHOUGH often difficult to obtain, and even in situations where time saving may be important, an accurate, concise history is imperative in the careful diagnosis of acute abdominal pain. Mackenzie, Deaver, and Moynihan have emphasized this, and Maes,¹ quoting Moynihan, says that the history is important because abdominal catastrophes are usually abrupt transitions from a quiescent to an acute phase in a disorder of long standing.

An idea of the onset, type of pain, location, relation to vomiting, and radiation, is important, and at times such points as the patient's age, occupation, or allergic history may assume considerable importance. Frequently questions are necessary in order to bring out evidence of predisposing lesions, *e. g.*, peptic ulcer, operations, heart disease. Such seemingly minor points as the previous dietary, presence of diarrhea (bloody or not), possibility of the same condition in others who eat the same food, constipation, passage of flatus, etc., may be of considerable moment.

EXAMINATION

The posture and actions of the patient will greatly help to differentiate colicky from inflammatory pain (notably acute peritonitis). This has been emphasized by Behan.² In inflammatory conditions the patient remains quiet and avoids all forms of movement, to the extent of breathing in a shallow, guarded way. With his hands he may lightly cover the abdomen, chiefly for protection. The legs are drawn up to relax the abdominal muscles. In colic, pressure seems to give relief, and in the paroxysms of pain the patient is as a rule doubled up and pressing on the abdomen with the forearms and elbows. In a general way, too, it may be said that applications of heat tend to relieve colic and cold inflammation.

It has been stated that colon bacillus and streptococcal infections are more painful than most other types. It must be borne in mind, however, as mentioned by Cope,³ that even with serious advancing lesions the pain tends to become less acute. This is explained by the gradual dilution of toxins, the fatiguing of the nerves, the rupture of inflamed organs, and the dimming of the sensorium.

The pulse is frequently a better general guide than the temperature. The axillary or rectal temperatures may often be more reliable than the oral, because patients in severe pain frequently pant through the mouth.

Tenderness increasing with pressure is a very helpful sign (Greene⁴). This should be distinguished from cutaneous hyperesthesia or hyperalgesia, especially when endeavoring to distinguish abdominal lesions from thoracic lesions giving abdominal pain. It must be stated that obstructed

organs may not show tenderness. Moderate tenderness alone cannot be considered an indication for operation, as we know a temporary gastritis, enteritis, or colitis may cause considerable tenderness.

Rigidity is a sign of marked significance, for it usually means irritation of the underlying peritoneum. Hixson⁵ says: "Since voluntary muscular contraction is of little value in diagnosis, it is of the highest importance to distinguish it from the true involuntary rigidity of a visceromotor reflex. Gentle palpation for a few moments with the flat of a warm hand, with regular steady pressure, and distraction of the patient's attention, will cause the voluntary rigidity to relax; also in voluntary contraction there is always a momentary relaxation of the muscles between the end of expiration and the beginning of the succeeding inspiration. True involuntary muscular rigidity never relaxes, however, even with gentle palpation and distraction of the patient's attention, nor does relaxation occur during respiration. . . . Muscular rigidity is an absolutely diagnostic sign of a serious underlying lesion, usually with some chemical irritation of the peritoneum, and therefore is one of the strongest indications for operation that we possess."

There might be some argument as to whether a given contraction or rigidity is due to direct irritation or to a visceromuscular reflex, between which Hixson seems to make no distinction. It seems generally accepted that true localized rigidity is in most instances an extension of infection from a diseased viscus to the overlying peritoneum.

Contractions of various portions of the recti must not be mistaken for tumor masses, collections of gas, etc. It is well to remember that nodal points exist in these muscles at the umbilicus and half way between the umbilicus and the costal margin.

Probably the best position for examination is with the patient flat on his back with arms along the trunk, and with knees and neck moderately flexed. Carson⁶ emphasizes proper exposure of the entire abdomen, stating that a fair idea of local and generalized rigidity can be gained from inspection. Pain of sacro-iliac origin can be ruled out by placing the patient on the painful side. Rubenstone⁷ states that sacro-iliac pain will be relieved in this position. If the sacro-iliac pain is bilateral, relief will be obtained on the side turned to.

LABORATORY EXAMINATIONS

A white blood count and differential, as well as a urine examination with microscopic study of the sediment, are practically always essential if not demanded. Needless to say that in female patients the urine must be a catheterized specimen. Greene⁴ advocates the use of the white blood cell counting chamber for making emergency differential counts. A number of my colleagues are carrying white blood cell counting chambers in their bags and using this procedure. I have found it helpful and believe it should be used more extensively.

Stitt⁸ makes the following statements in regard to polymorphonuclear cell percentages. "In questions of operation in appendicitis or similar conditions, leukocytosis with polymorphonuclear percentage of 85 to 90 indicates immediate operation; percentages over ninety point to peritonitis, and if with such percentages there is absence of leukocytosis the prognosis is grave. Leukocytosis with less than 75 per cent polymorphonuclears indicates an infection of little virulence or a walled-off process with an exacerbation."

When there is a question as to whether a condition may be perforated peptic ulcer or acute cholecystitis, the finding of gas under the dome of the diaphragm by means of the x-ray points to perforated peptic ulcer. In cases of obstruction high in the course of the intestine, there may be no distention and flatus and feces may be passed by rectum, but the use of the fluoroscope and a small amount of barium mixture by mouth may demonstrate the point of obstruction. Two such cases are reported by Heuer.⁹ Again where there is a suspicion that beginning pneumonia may be the cause of abdominal pain, the x-ray may be helpful.

ACUTE APPENDICITIS

In a study of 1216 cases of acute appendicitis at the Cincinnati General Hospital, Heuer⁹ found 45 per cent to have the classical signs and symptoms. This means that more than half presented some doubt. This fact should spur us on to closer and more intense study.

Although taken more or less for granted usually, age should be considered rather carefully in the diagnosis of acute appendicitis. In 1718 cases, Heuer found 68 per cent occurring between ten and thirty years of age. It is apparent, therefore, that appendicitis is primarily a disease of adolescent and young adult life.

Tenderness is undoubtedly a very important finding. In Heuer's smaller series localized pain and tenderness were present at McBurney's point in 95 per cent. Regarding tenderness, Deaver's¹⁰ statement is well worth quoting. "The modern trend is to depend on the leukocyte count to clinch the diagnosis (of appendicitis). As I have repeatedly said, and as I say again, for me the degree of abdominal tenderness is much more decisive than the degree of leukocytosis. This, of course, demands experience and the light touch which is so valuable an asset to every surgeon. The degree of tenderness is the storm signal of the diseased appendix by which it clamors for relief from the impending disaster of peritonitis."

Rigidity, although a valuable sign, is not as constant as tenderness, probably because the inflammation does not always extend to the parietal peritoneum, which is contended by Kälteyer¹¹ to be the cause of the rigidity.

A number of authors emphasize the occurrence of left-sided lower abdominal or bilateral pain in pelvic appendicitis, along with bladder disturbances—frequency, dysuria, or inability to empty the bladder. Rectal or vaginal examination is important in these cases and may reveal tender-

ness, induration, or abscess formation. The pain of appendicitis may be referred to the right testis or thigh.

Nausea and vomiting are nearly always present and the pain of appendicitis precedes rather than follows the vomiting. This is of particular importance in children.

The temperature, pulse, and respiration are usually slightly to moderately increased, but any one or all three may be normal in the face of a virulent infection.

The frequency of the occurrence of appendicitis and the occurrence of abdominal pain without appendicitis in children with upper respiratory infections, has been particularly emphasized by Brenneman. On this point Carey¹² says: "Throat infections should not throw us from the diagnosis of appendicitis, but rather put us on our guard for the closer observation of those cases where there has been a history of frequent bowel movements and occasional vomiting. . . . Diagnosis rests on localized tenderness which is persistent and with the tendency to be more severe, and not upon the fleeting type of pain which is a very common complaint in children. . . . Early and frequent observation without too marked a tendency toward conservatism is essential." It is well to bear in mind that pneumonia causes abdominal pain more frequently in children than in adults.

Concerning the differential diagnosis of high-lying appendix and acute cholecystitis, Deaver¹⁰ advocates a few hours of treatment followed by deep palpation. The treatment includes the use of morphin (dangerous unless the patient is under the complete control of the physician), gastric lavage, ice packs, proctoclysis, and the withholding of food and water. "After a few hours of the treatment, the intraperitoneal irritation will have diminished sufficiently to make the muscles overlying the inflamed area more flexible so that the tips of the fingers can be carried deep enough to locate the point of greatest tenderness, and perhaps feel the fundus of the gall-bladder by having the patient breathe rather deeply but slowly, when it will be felt moving with respiration. This makes the diagnosis certain. In an appendicitis the line of tenderness will be in the line of the position of the appendix. In addition to these physical findings, the history is of utmost importance." According to French,¹³ when an attack of appendicitis simulates gall-stones, it may be of help to remember that indicanuria is common in the former but usually absent in the latter.

GALL-BLADDER DISTURBANCES

Due to the close association of gall-bladder infections and gall-stone disease, they will be considered together. Predisposing causes stand out prominently in gall-stone disease. They are particularly: 1. Age, the vast majority over thirty years. 2. Sex, two to five times more frequently in women. 3. Multiple pregnancies. 4. Obesity—thick, stocky individuals (Graham¹⁴).

Moynihan¹⁵ says, "The most common symptom of gall-stones is indigestion." It is certain, that

most gall-bladder sufferers give a history of previous attacks with interim symptoms of indigestion, gas, belching, and abdominal discomfort often brought on by certain foods.

Gall-bladder colic tends to occur at night. (It seems that striped muscle is particularly active in the daytime and smooth muscle at night.) Vomiting may initiate an attack of gall-bladder colic and at times may give relief. Gall-bladder disturbances seem to follow rather frequently upon operative procedures in other parts of the body and in the course of infections, especially typhoid fever.

The pain in a gall-bladder attack may be cramp-like, stabbing, or aching and, "when severe is probably as terrible a suffering as a patient is ever called upon to endure." It is located most frequently in the gall-bladder region, less often in the epigastrium, and occasionally in the left hypochondrium.

Tenderness in the gall-bladder region is constant in gall-bladder trouble, as is Murphy's sign. As quoted by Moynihan,¹⁵ Murphy describes the sign as follows: "The most characteristic and constant sign of gall-bladder hypersensitiveness is the inability of the patient to take full inspiration when the physician's fingers are hooked up deep beneath the right costal arch below the hepatic margin. The diaphragm forces the liver down until the sensitive gall-bladder reaches the examining fingers, when the inspiration suddenly ceases as though it had been shut off. I have never found this sign absent in a case of calculus or in infectious cases of gall-bladder or duct disease."

Radiation of the pain is most frequently toward the lower portion of the right scapula, but often to the lower dorsal area of the back, and may be to the front of the chest or to right iliac fossa. Nausea and vomiting are very common though probably not as prominent as in appendicitis. Chills are quite common and may constitute a rather important point in the differential diagnosis.

Rigidity of the muscles of the right upper quadrant is frequently mentioned in the texts, but here again true rigidity is probably largely dependent on the transmission of infection to the peritoneum of the area.

Intrathoracic conditions sometimes give rise to pain which may be confused with gall-bladder disturbances. Chief among these is coronary occlusion. This differentiation is well considered by Faulkner, Marble, and White.¹⁶ They note that coronary occlusion occurs four times as frequently in men as in women, that the patients very often are sufferers of angina pectoris, that the pain is often suffocating, that it radiates to the left arm, that signs of heart failure, *e. g.*, dyspnea, cyanosis, and poor quality heart tones are outstanding, and that the electrocardiograph may be of aid. Diaphragmatic pleurisy may also present a problem in differential diagnosis. In addition to the general features of pleurisy, hyperesthesia of the skin of the painful area may be marked while deep pressure is well borne. Vomiting and hiccough may be present.

INTESTINAL OBSTRUCTION

"In the presence of an abdominal scar, the result of a previous abdominal operation, in a patient suddenly stricken with acute intermittent abdominal pain one should first think of intestinal obstruction" (Deaver¹⁰).

Intestinal obstruction early presents some findings rather unique in abdominal disturbances: (1) the temperature may be normal or subnormal and the pulse unaltered; (2) vomiting is persistent and not accompanied by nausea; (3) palpation may be negative for tenderness and rigidity. In other words, in the early stages, except for the pain, the patient may not seem to himself or to the physician to be terribly ill, but frequently this is the life-saving time to make the diagnosis.

The usual four cardinal signs—pain, vomiting, obstipation, and tympanites—will not do for high obstructions, as some feces may be passed and distention not occur. These, of course, will also not hold for partial obstructions for the same reasons. Regarding the pathognomonic fecal vomiting, Maes¹ says, "Fecal vomiting is a sign of impending death rather than a symptom of disease."

Intussusception, according to Carson,¹⁷ is one of the most readily recognized surgical emergencies of the abdomen, occurring most frequently in male breast-fed babies, sometimes preceded by diarrhea and presenting blood and mucus in the stools (80 per cent, Ortner) and a tumor on abdominal or rectal examination. According to Ortner¹⁸ the latter can be felt to change in consistency during contractions.

Volvulus may cause an acute distention greater than that which occurs with any other lesion of the bowels (Behan²). It usually occurs in adult males and involves the sigmoid most frequently. Reflex ileus may occur in practically any severe abdominal emergency, as well as in uremia, and may cloud the diagnosis considerably.

PERFORATED PEPTIC ULCER

"A scaphoid rigid abdomen occurs almost alone in perforation of a peptic ulcer" (Greene⁴). Deaver¹⁰ gives a graphic description: "... (perforated ulcer presents) sudden onset of acute abdominal pain, making its appearance like lightning out of a clear sky, immediately followed by board-like rigidity of the abdominal walls that are tender but not impressionable to touch. These patients maintain a more or less fixed position in bed, hoping by so doing that they will suffer less. This is a sign of moment."

In a series of eighty-eight cases, Heuer⁹ found a history of preceding ulcer or strongly suggestive of ulcer in 80 per cent. Rather than appearing like lightning in all cases, I believe there are a considerable number who show an aggravation of ulcer symptoms just before perforation. The intense pain occurs so suddenly, however, that it is interesting to see how many refer to the exact time of its onset. Sometimes it occurs while the individual is under strain and he feels something

give way or it may waken him out of a sound sleep.

Pain referred to the shoulder due to irritation of the diaphragm may be a helpful point, as well as the flame-like or even slower spread of the pain downward over the abdomen. A number of perforations undoubtedly become walled off, present less severe symptoms, and are never recognized or later present other conditions.

Early shock is severe, and the normal or subnormal temperature in the presence of an increased pulse and respiration with a marked leukocytosis or leukopenia indicates a lesion of marked seriousness. Demonstration of the obliteration of liver dullness or the presence of fluid cannot be constant, but depend largely on the amount of gas or fluid present.

ACUTE PANCREATITIS

Sudden, extreme pain in the epigastrium, followed by vomiting, shock, and extreme tenderness in the upper abdomen is the usual picture at the onset of acute pancreatitis. Cyanosis and, later, jaundice may appear and an indefinite tumor mass may be palpated in the epigastrium. Occasional digestive upsets may have preceded the attack and the radiation may be downward or the same as in gall-bladder disturbances. Behan² states that pain and tenderness are frequently present posteriorly in the region of the second and third lumbar vertebrae, due to the absence of a capsule in the pancreas and the intimate relationship the organ has with the bodies of these two vertebrae. Glycosuria is usually not present. Acute pancreatitis simulates perforated peptic ulcer and intestinal obstruction so closely and it should be thought of when either of these conditions is under consideration.

ACUTE SALPINGITIS AND ECTOPIC PREGNANCY

Profuse vaginal discharge is usually a prominent feature in acute salpingitis. There may be a history of exposure or infection in the partner. The pain and tenderness is fairly well confined to the lower abdomen and pelvis and is usually not continuous nor extremely severe. Vaginal examination reveals the discharge, tenderness, and possibly the presence of a mass or bulging. Some physicians seem to place a good deal of confidence in the degree of induration or rigidity found on vaginal examination. Toxicity is ordinarily not great and the temperature and blood count correspond. Determination of the sedimentation time of the blood helps to confirm the diagnosis and shows the acuteness of the infection.

Ectopic pregnancy is to be suspected when a patient (especially when previously sterile) misses a period or two, and then intermittently has slight vaginal bleeding or "spotting." Small tears or stretching in the pregnant tube may cause extreme lancinating pain in the lower abdomen at times referred to the thigh. Considerable blood may be lost in the abdomen over a period of days before being reflected in the pulse or blood picture. In suspected cases where a mass is found in the cul-de-sac, the use of an aspirating needle has been

suggested. The type of case which ruptures with severe hemorrhage, air hunger, shock, etc., is obviously a surgical emergency.

URETERAL AND RENAL CONDITIONS

Ginsberg,¹⁹ quoting Howard Kelly, says, "between 60 and 70 per cent of patients with ill-defined right-sided pain have diseases of the kidney and ureter." Lowsley and Twinem,²⁰ studying the genito-urinary systems in eighty-four patients, state that more than 50 per cent were incorrectly supposed to have had appendicitis, or appendicitis and some other abdominal inflammation. Forty-seven and five-tenths per cent had had major operations without relief.

Although the pain of ureteral obstruction due to stone, kink, or stenosis is typically located in the lumbar region, it may be abdominal and exceedingly severe there. Considerable study may be necessary to make a diagnosis, but such points as the following may be helpful: the pain is usually colicky in type; it is frequently transmitted to the bladder, genitals or thigh; bladder tenesmus is frequently present as well as frequency; there may be finger-point localization of the pain and the site of the pain may move downward; red blood cells or small calculi or the so-called smoky urine may be passed; a tender renal tumor may be present; and sometimes relief is sudden and may be followed by the passage of large quantities of urine. Attacks due to stone usually begin suddenly in the daytime due to jostling or exercise, and an outstanding feature may be an apparent lack of toxicity.

Confusion may easily be caused by the presence of fever, vomiting, tenderness, slight rigidity, and the lack of urinary findings, or the lack of opacity of stones to the x-ray, or the presence of an inflamed appendix lying against a ureter. The increasing use of the iodine compounds which are excreted in the urine and are opaque to the x-ray should be helpful in clearing the diagnosis in some of the less acute of these cases. Complete cystoscopic and pyelographic study, however, may be necessary.

MISCELLANEOUS DISEASES

Lead Colic.—Occupation, presence of lead line in gums, and stippled red cells in the blood smear may be helpful. The pain may be described as a knotting or twisting of the bowels.

Gastric Crisis of Tabes.—Pupillary reflexes and knee-jerks should be tested in all cases of abdominal pain and vomiting in adults. The pain is described as knife-like or boring and difficult to localize. Vomiting is prominent. History of sphincter disturbances, and the Wassermann may be helpful.

Twisted Pedicle.—Behan² quotes Richardson as follows: "A history of tumor, a sudden enlargement and tenderness in the tumor, preceded or accompanied by pain, are sufficient to make the diagnosis of twisted pedicle."

Acute Diverticulitis.—Called "left-sided appendicitis" and, according to French,¹³ properly so. A disease of the second half of life. Predisposing causes are constipation and colitis.

Rupture of Abdominal Organs.—Usually preceded by trauma. Rigidity is a constant sign (Deaver).

Herpes Zoster.—The pain follows the nerves. Hyperesthesia and hyperalgesia are marked. Prodromes are soon followed by characteristic lesions.

Gastro-Intestinal Allergy.—Absence of rigidity helps to rule out a surgical lesion (Rowe²¹). Allergic history and food idiosyncrasies present.

Infarction of Abdominal Organs.—Usual presence of subacute bacterial endocarditis.

Malingering.—Scars of abdominal operations frequently present. Patients force themselves to gag and may suggest that "a shot might help."

CONCLUSIONS

It must be admitted that 100 per cent correct diagnosis is impossible in abdominal emergencies. However, it is hoped that the poor record of diagnosis as shown in the study of Lowsley and Twinem,²⁰ and others, may not long be the record of our profession. Bevan,²² in conjunction with Sippy, claimed a record of 80 to 90 per cent correct clinical and pathological diagnosis in such cases. More careful histories and as thorough a study as possible of every case without an over-desire to operate will improve results.

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DISCUSSION

CHARLES A. DUKES, M. D. (426 Seventeenth Street, Oakland).—On the subject of "Acute Abdominal Pain," there are just a few things which I would like to speak about, and one of them is moderate tenderness about McBurney's point in patients who have had intermittent pain. I feel that frequently many cases of acute appendicitis have been overlooked in this condition. It has been our rule, when other acute conditions have been ruled out, to advise immediate operation, and many times we have been rewarded by finding acute conditions. The old saying is: "Diagnosis of appendicitis means removal of the appendix."

In diagnosis of appendicitis, we should not be led astray by the age of the patients. I can recall vividly an operation on a woman of seventy-four who had very few signs; no more than slight tenderness about McBurney's point and a history of intermittent pains, in whom we found an acute condition of the appendix. Frequently in these cases we find no rigidity. It has always been our plan to operate on all acute abdomens, regardless of type of involvement. In a large number of patients, I have had very good results by following out this plan of procedure.

Acute pelvic conditions and acute gall-bladders have responded very well to this procedure, and we feel that we have saved the patients much time and suffering by doing so.

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ROBERT T. SUTHERLAND, M. D. (251 Moss Avenue, Oakland).—In presenting the many conditions in which abdominal pain occurs, Doctor Ellwood has emphasized the importance of correctly evaluating this cardinal symptom and of so correlating it with accompanying signs that a correct differential diagnosis may be made. The frequency of the symptom presents a rather large field for discussion, and as the allotted space will permit of the proper consideration of but one disease, I should like to discuss the place which coronary occlusion holds in the problem of the differential diagnosis of abdominal pain.

As mentioned by the author, the pain of coronary occlusion, although most commonly located in the chest, is frequently referred to the abdomen. The condition is of more frequent occurrence than generally recognized and, because of the severe abdominal pain accompanying it, has often been diagnosed as "ptomain poisoning" or "acute indigestion with death." Like gall-bladder disease, it is most common in middle or late life and its pain is frequently indistinguishable from gall-stone colic. Other conditions which coronary occlusion pain has frequently simulated are intestinal obstruction, perforated peptic ulcer, and acute pancreatitis. However, there are some signs which help very materially in making a differential diagnosis.

The patient is frequently found bathed in a profuse perspiration, sitting in the upright position, with varying degrees of air-hunger and shock. Vomiting, which is very common, gives no relief to the pain. The temperature, although exceptionally normal, usually varies from 99 to 101 degrees and may occasionally reach 104 degrees. Even in cases without complications it may last for a week or more. The white blood

count usually rises promptly and varies from 9,000 to 30,000 with a relative increase in the polymorphonuclears. A quite usual and outstanding sign is the drop in the blood pressure, which is accompanied by a reduction in the pulse pressure.

A careful examination of the heart will generally clinch the diagnosis. This organ is frequently enlarged and may be either fast or very slow. The sounds are often feeble and are sometimes accompanied by a friction sound if the area of infarct is located superficially enough to produce a localized pericarditis. The electrocardiographic evidence, although most commonly indicated by a distorted T-wave or a characteristic deviation of the R-T interval, is frequently absent, as it is dependent upon the area of myocardium involved. Recently Wolferth and Wood have called attention to the use of the chest lead as an aid in demonstrating the characteristic findings.

A word of warning seems to be in order. As formerly too many cases of coronary occlusion with abdominal pains were improperly diagnosed and operated upon, there seems to be a growing tendency to make a diagnosis of coronary occlusion upon insufficient evidence.

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EDWARD N. EWER, M. D. (251 Moss Avenue, Oakland).—The observation quoted from Heuer that more than half of the acute appendicitis cases admitted to the Cincinnati General Hospital were lacking in some important part of the classical symptomatology of that disease is significant. More than half presented some doubt. The supposed ease of diagnosis of appendicitis perhaps rests upon certain thoughtless remarks made by eminent surgeons in unguarded moments, such as: "Appendicitis can be diagnosed with the foot"; "Do the appendectomy first and take the blood count afterward." Any physician who has seen much service in the admission department of a large general hospital well knows the difficulties encountered in differentiating the acute lower abdominal emergencies.

Every gynecologist finds in his wards an occasional appendix case which has escaped the vigilance of the admission diagnosticians. As acute appendicitis calls for immediate operation and acute salpingitis does not, every symptom and test must be considered to clear the doubt.

I have recently had sedimentation times taken in over one hundred hospitalized acute appendix patients and find that four-fifths of the tests are over fifty minutes. When an easily discovered symptom or sign occurs in 80 per cent of all the cases of a definite disease condition, it is entitled to respect.

Even the appendiceal abscess cases showed rapid rates (under thirty minutes) in only one-third of the cases. On the other hand, as everyone knows, it is exceedingly rare for patients with salpingitis in any degree of activity to present slow blood sedimentation rates.

So with doubtful pelvic findings and right-sided pain with a slow sedimentation time, we feel justified in ruling out the tube diagnosis and placing the suspicion upon the appendix.

It is well to remember that in lower abdomen emergencies requiring immediate operations the sedimentation time is likely to be slow. This holds good for twisted pedicel cysts, tubal pregnancies with and without rupture, as well as appendicitis. I have seen several such cases, and one of twisted hydrosalpinx, where the diagnosis and the decision for immediate operation were settled by the sedimentation time. Pelvic inflammatory disease, by contrast, is always attended with rapid blood sedimentation and seldom or never calls for immediate surgery.

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DOCTOR ELLWOOD (Closing).—This paper largely represents the experiences and opinions of others. I have for the most part merely set the points down. However, among them I believe will be found many ideas and suggestions worth remembering.

STATE MEDICAL LIBRARY OF CALIFORNIA*

A SURVEY OF THE FIRST YEAR'S WORK

By CHAUNCEY D. LEAKE, PH. D.

San Francisco

IT is now about a year since the California State Medical Library inaugurated its services to physicians and medical institutions. Miss F. B. van Zandt, who had successfully established similar efforts in Iowa and Wisconsin, appeared at the 1932 Pasadena meeting of the California State Medical Association to explain the set-up of the library and the facilities available. She then undertook by extensive personal visits in various communities through the state outside of the large centers to acquaint physicians with the opportunities afforded by the library and to ascertain their wants. Since October, 1932, she has discussed these matters with 1,209 doctors in the state. This is approximately 12 per cent of the registered physicians and surgeons in California.

Two branches of the State Medical Library have been established: one at the Los Angeles Medical Department of the University of California, 737 North Broadway, Los Angeles, headquarters for Miss van Zandt, with Miss Marjorie Utt as assistant, and the other at the University of California Medical School Library, Second and Parnassus avenues, San Francisco, in charge of Miss Frances Tomlinson.

The primary purpose of the State Medical Library is to provide registered physicians and surgeons of the state an opportunity to keep abreast of current medical advance and to offer them adequate library facilities. The effort is particularly directed toward physicians practicing in outlying communities where medical library facilities are not available. This purpose can best be met by a circulating periodical service under which the physician may receive regularly one or more periodicals in a field of medicine in which he is especially interested. Supplementing this the physician may call upon the State Medical Library for literature relating to some particular problem concerning him at the moment. In this connection the State Medical Library has available a considerable number of reprints which are classified according to subject-matter and which are available as packets for physicians interested in the particular subject. Mailing costs are met by the physician.

The growth of the services rendered by the State Medical Library from October, 1932, to May, 1933, is indicated in Table 1. This table shows the increase in the number of borrowers, the items loaned, and the number of communities served by both the Los Angeles and San Francisco branches. The library may now be said to be functioning at about the capacity of its present staff. Any significant increase in number of borrowers will necessitate either an increase in the staff of the library or a diminution in the efficiency of its services.

* A report by C. D. Leake, librarian, and submitted by him to the Advisory Board of the State Medical Library. (See page 446 for editorial comment.)

TABLE 1.—Showing the Increase in Number of Borrowers and Items Loaned in the State Medical Library from October, 1932, to June, 1933.				
	Los Angeles		San Francisco	
	October 1932	June 1933	October 1932	June 1933
Number of borrowers	93	291	64	316
Items loaned (books and journals)	67	493	211	556
Number of communities served	22	65	29	75

The total number of journals subscribed for, together with the annual cost of subscription, for both the Los Angeles and San Francisco branches, is indicated in Table 2. This again is about the limit of the current resources of the library.

The periodicals chiefly in demand in the State Medical Library are those relating especially to surgery, pediatrics, and otorhinolaryngology. Certain special journals relating to laboratory diagnosis and biochemistry are also considerably in demand. Current issues of certain British and German specialty journals are also extensively circulated.

Most items loaned by the State Medical Library are retained by the physician borrowing them for an average of five days. With packing, mailing, and return, an average of nine days per item is consumed before the next borrower may be served by the same item. After circulation, periodicals are filed and preserved. Back numbers of periodicals become available for special consultation. At present reference facilities are largely supplied through the resources of the University of California Medical School Library. It is hoped that a satisfactory reference service may be established in the State Medical Library.

The State Medical Library is anxious in every way to coöperate with the two existing private medical libraries in the state: the Barlow Medical Library at Los Angeles and the Lane Medical Library at San Francisco. On her visits, Miss van Zandt has referred inquiries for reference services to these two libraries wherever possible with the suggestion that the physician contribute to the support of these libraries for the return of whatever service they may render. Because of the excellent medical library facilities in Los Angeles and in San Francisco no attempts have been made by the State Medical Library to furnish circulating periodical service in these communities. Practically all the borrowers regularly re-

TABLE 2.—Showing Number and Annual Cost of Journal Subscriptions of the State Medical Library.				
	Total Subscriptions	Number of Different Journals	Annual Cost of Subscriptions	Average Number of Borrowers per Journal
Los Angeles	97	90	\$1,088	4
San Francisco	92	80	\$1,040	4

ceiving current medical periodicals in the special fields in which they are interested live in communities quite remote from either Los Angeles or San Francisco.

Due to the necessity of conserving to the utmost the funds available for the State Medical Library there will be no effort made during the next two years at least to acquaint, by personal visits, physicians in the state with the opportunities afforded. Sufficient funds are available to maintain the State Medical Library on the plane on which it is now functioning for three or four years. As far as can be ascertained the State Medical Library is giving satisfactory service to those physicians now regularly borrowing from it. Any suggestions regarding the betterment of its service will, of course, always be respectfully entertained.

U. C. Medical School,
Second and Parnassus Avenues.

REFORESTATION CAMPS AND MEDICAL OPPORTUNITY*

By E. L. MUNSON, M. D.
San Francisco

THE plan of President Roosevelt for unemployment relief through the reforestation work of the Civilian Conservation Corps, now being organized, has very broad medical aspects and responsibilities; and this is particularly the case here in the western third of our country.

In his message on the subject the President said: "... We can take a vast army of these unemployed out into healthful surroundings. . . ." In a broad way, and for the country at large, this theorem is true.

A PUBLIC HEALTH PROBLEM INVOLVED

But the aggregation of young men within the required age limits of 18 to 25 years of course raises the same general medical problems that always attach to the mobilization of recruits for war. Measles and other acute infections must be expected and combated; and immunization against typhoid, smallpox, and other diseases must be carried out. In addition, in the country west of the Rockies the medical responsibilities will be greatly increased—and particularly so in California—by certain endemic infections of which little is at present known by the profession at large.

The general plan for the Citizens Conservation Corps calls for the enrollment for six months of a total of 250,000 men, with their assignment to work for improvement of forest resources. They are to be organized into groups of two hundred men each, and these are to be scattered through the forest reserves over the entire country. Their administration is to be carried out under the army, and their medical care and sanitary superintendence has been made a charge of the army medical department. To assist with the medical service the assignment of 169 medical officers of the navy has been announced, and a number of Medical Reserve Officers and contract surgeons have been placed on active duty.

But of this total burden the share which falls on the Ninth Corps Area—which comprises the states of California, Oregon, Washington, Idaho, Montana, Wyoming, Utah, and Nevada—is numerically out of all proportion. Through climatic conditions, these states include a major part of the forest resources of the whole country. As a result the allotment to this Corps Area is nearly two-thirds of the total reforestation personnel; amounting to 135,000 men and to be scattered in about 635 different camps in the vast area from the Rocky Mountains to the Pacific.

DISEASES PECULIAR TO THE NINTH CORPS AREA

We already know that the exceptional climatic conditions in this area have their influence upon the occurrence of disease as to etiology, animal reservoirs, and insect transmitters; and that at the higher levels various diseases of more or less local distribution are found which elsewhere do not occur or are of much less practical importance. Probably the very names of most of them represent merely nebulous generalities to the majority of practitioners of the country at large, to whom such diseases as Rocky Mountain spotted fever, bubonic plague, relapsing fever, tularemia, undulant fever, and other infections are almost wholly in the category of the clinically unknown.

All these animal-borne infections occur in this Ninth Corps Area, and particularly at the higher altitudes in which practically all the forest reserves are located and in which reforestation camps will be established. Some of these diseases, like tularemia, may be regarded as generally endemic over the entire reforestation area. Some, like relapsing fever, have their rodent reservoirs at altitudes of 6,000 feet and above; others, like plague in ground squirrels, may be found from some 4,000 feet down; again, Rocky Mountain spotted fever may be found from 2,000 feet up, but with extraordinary differences in case mortality as between localities and apparently between different levels.

WILL NEW MEDICAL PROBLEMS COME INTO BEING?

Heretofore these diseases have not been common in man, merely because climatic and other conditions were such that local human population in these high altitudes has been extremely sparse, or none at all. For these reasons, and because of the paucity of human cases, we now do not even know the extent and distribution of the infected areas; but there is every reason to believe that these are much more extensive and continuous than the occasional sporadic cases in ranchmen, sheep herders, prospectors, sportsmen, and others who penetrate these wildernesses of the higher altitudes would seem to indicate. And for most of these diseases the matters of life history, transmission, and prevention are still only imperfectly worked out.

HOOPER FOUNDATION HAS OFFERED ITS SERVICES

But the scattering of one hundred and thirty-five thousand non-immunes in over half a thousand camps to be located on these known or

* Editor's Note.—Doctor Munson, who contributes this article, is a retired Brigadier General of the United States Army Medical Corps. For additional comment, see page 445.)

presumably infected areas creates not only unique professional problems, but offers opportunities for medical research into their special localized diseases as perfect as if actually staged for the purpose. These have been promptly recognized by Dr. Karl F. Meyer, director of the Hooper Foundation for Medical Research, and he has offered to the military authorities the full resources of his institution for the scientific investigation of these and other appropriate medical problems that may arise. This aid has been accepted by Colonel C. J. Manly, chief surgeon of the Ninth Corps Area and in charge of all medical administrative phases, and plans for full and effective coöperation are now being worked out. At the present time, one or more field parties to carry out local research on the ground, together with coördinating investigation at the Foundation itself, are contemplated.

It is reasonable to hope that valuable additions to our present limited knowledge as to the nature, virulence, and prevention of these serious diseases may result from the introduction of a vast number of susceptibles into the infected areas and the scientific study of the resultant pathology. Chief Surgeon Manly is now preparing a medical directive for his field force of army surgeons which will cover our present knowledge of these little known infections. But in spite of this precautionary effort, cases of such diseases may be expected to occur; and the present spot-map of their endemicity will doubtless be proportionately expanded, and local physicians be better forewarned as to possibilities of diagnosis when some of these little known diseases occur.

One of the major features of the reclamation work is to construct new roads and trails by which present inaccessible areas in the forest reserves will be opened to summer campers and sportsmen. The result will, naturally, be a considerable influx of vacationists into these infected areas in the future, so that any scientific facts gained as a result of the operations of the Citizens Conservation Corps will have a permanent and increasing medical value.

Hooper Foundation, University of California.

SPINAL CURVATURES—VISCERAL DISTURBANCES IN RELATION THERETO*

By NEVILLE T. USSHER, M. D.
Santa Barbara

DISCUSSION by William J. Kerr, M. D., San Francisco; F. M. Pottenger, M. D., Monrovia; Lewis Gunther, M. D., Los Angeles.

IT has long been recognized that scolioses and other curvatures of the spine, with the attendant pathologic changes in and about the spine, have produced cutaneous pain along nerve pathways directly related to this curvature. So-called "intercostal neuritis," for example, has often been ascribed to a dorsal scoliosis of the spine. Cutaneous pain and sensory changes of the abdominal wall have also been recognized as being due in

some cases to spinal misalignments, and a number of writers have described the effect of pathologic changes in the spine itself as producing radiation pain. For the most part, they stress the cutaneous nature of the pain. Mayer¹ describes certain sensory and motor radiation phenomena due to spinal nerve root inflammation (Dejerine's² radicular syndrome) and differentiates the symptomatology from that produced by peripheral neuritis. Irritation of the spinal nerves as they leave the cord, whether within the confines of the bony canal or just outside of it, is shown to produce somatic disturbances in the levels enervated by these nerves. The term "radicular syndrome" rather than "radiculitis" is preferred by Nielsen³ in describing this condition, since he recognizes the fact, as few apparently do, that the symptoms may arise from changes in the spinal configuration, or from a myositis relatively distant from the spinal roots. He does not deal with the sympathetic relationship, however. His emphasis on the correction of scolioses in this type of case is a definite step forward.

Gunther and Kerr⁴ in recent papers have recorded very complete observations on the effect of osteo-arthritis on the spinal roots. They describe the result of this spinal-root irritation in the various segmental areas of the body. It was shown that the symptomatology was entirely dependent on the vertebral levels affected. Cervical involvement was associated with headache, "sore neck," and pain in the shoulders and arms. Precordial pain, often thought by the patient to be due to the heart, was found to be due to an osteo-arthritis of the upper dorsal spine. Pain in the gall-bladder and epigastric areas was noted when the mid-dorsal area was involved. Appendicitis and pelvic disease were elements in differential diagnosis when the lower dorsal vertebrae were affected.

Carnett^{5,6} in 1927 investigated the follow-up reports of operations for chronic appendicitis and gall-bladder disease done by a large group of capable surgeons and found that a fairly high percentage of patients was not relieved by the operation. He stresses the importance of distinguishing between abdominal pain due to intercostal neuralgia and that caused by the appendix or gall-bladder. A brief mention is made of a girl whose "chronic appendix" and later whose apparently normal right ovary were removed with a return of right-sided symptoms after the operations. It was then found that she had a lateral curvature of the spine and shortening of one leg. When this condition was remedied her pain ceased and had not returned during the following six years. Carnett emphasizes the cutaneous disturbances, as most of the recent writers have done. However, he does not lay much stress on the intercostal neuralgias as being the direct result of spinal curvatures.

LITERATURE LACKING IN GENERAL RECOGNITION

Search of the literature apparently does not reveal a general recognition of the effect of spinal curvatures and their concomitants on the viscera. Rather, visceral pathology has been studied first and theories have been propounded to explain the

* From the Santa Barbara Clinic, Santa Barbara, California.

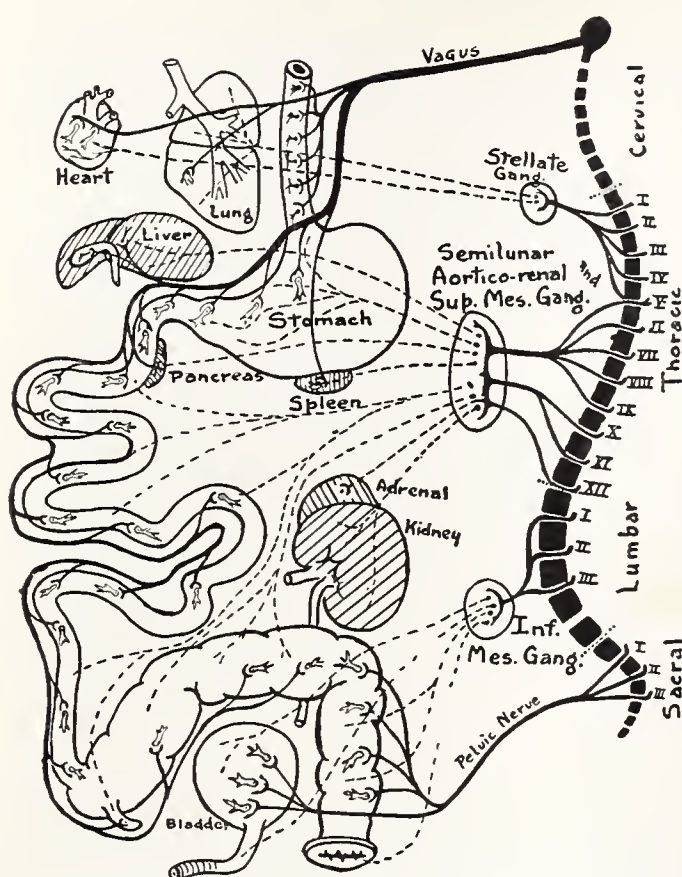


Fig. 1.—Showing the relationship of the visceral organs to the chief ganglionic groups and spinal segments. The sympathetic nerves are represented by broken lines, the parasympathetics by heavy solid lines. (From Pottenger: Symptoms of Visceral Disease.)

mechanics of pain in areas related to the visceral disturbance. For example, production of pain and tenderness at the site of an inflamed appendix and in the superimposed abdominal wall occurs, although it is generally conceded that the sympathetic fibers to the inflamed viscus do not carry pain sensations. Mackenzie,⁷ in his explanation of such a phenomenon, suggested the now well-known theory of the "irritable focus" in the spinal cord. According to his view, physiologic or pathologic changes in a viscus cause a perpetual bombardment of the spinal-cord segment traversed by its splanchnic nerves. This bombardment results in an irritable condition of the cord at this point, and when ordinary afferent impulses from the skin, muscles, and peripheral structures enter this segment a sensation of pain is experienced. This pain then appears to the patient as coming directly from these superficial structures. This is called the "viscerocutaneous reflex" theory. Morley,⁸ however, proposes a simpler theory—that of the "peritoneocutaneous reflex" in which direct irritation of the parietal peritoneum over an inflamed viscus causes reflex pain in adjacent skin areas without the splanchnic nerves being involved. One is led to believe, however, that a combination of Mackenzie's and Morley's theories hold true in most cases. Morley,⁸ Weiss and Davis⁹ have shown in addition that infiltration with a local anesthetic of cutaneous areas of pain has in many instances caused a complete loss of pain sensation related to the underlying viscus such as the gall-bladder, stomach, or appendix.

The intimate relationship of the viscera with the corresponding segmental distribution of nerves is

well brought out by Pottenger.¹⁰ He states that "the segmental relationship which exists between an afferent visceral neuron and an efferent somatic neuron probably also exists between an afferent somatic and an efferent visceral neuron," and assumes "a continuous flow of stimuli from the surface of the body inward to the viscera and from the viscera outward to the skeletal tissues." The schematic diagram of the relationship of the visceral organs to the chief ganglionic clusters and thence to the spinal levels is well shown in Fig. 1.

COMMENT

If, then, there is such a close relationship between the viscus and the cutaneous nerves, why not a reversal of the process, namely, intra-abdominal pain and disturbances in the viscera as a result of irritation in the spinal region and not of primary disease in the organs affected. In other words, instead of starting with a pathologic viscus and tracing the path of its reflex pain, we start with an abnormality of the spinal configuration and designate it as the primary cause of the visceral disturbance.

Of course there are innumerable cases where an individual has had some type of spinal curvature, even from birth, without developing radiation pain or symptoms of visceral pathology. It is my thesis, however, that in certain instances an irritation is set up about the spinal nerve roots or sympathetic ganglia near the spine. This irritation may be due to a local myositis, osteo-arthritis (Dejerine,² Mayer,¹ Gunther and Kerr⁴), bony malformation at the nerve canals, or possibly direct pressure on these nerves due to the angle of curvature. In turn, because of the intimate relationship of the sympathetic network with that of the somatic nervous system, (1) a motor reaction may occur in the innervated viscus, such as spasm, and hypercontractility of the organ, or (2) a sensory reaction may occur such as colicky pain, sense of fullness, inability to draw a full breath, etc. Theoretically, both the motor and the sensory phenomenon should often be found together.

From the above considerations it would seem possible, then, that symptoms of gall-bladder disease, appendicitis, stomach ulcer or gastritis, partial ureteral obstruction, colitis, spastic constipation, and other forms of visceral irritation may be produced directly or indirectly from a spinal curvature. It is my belief that a large group of individuals who have been treated or even operated for apparent visceral disease without definite relief may fall under this classification. These patients have usually "made the rounds" and the spinal curvature has often remained undiagnosed in spite of an otherwise complete medical examination. Roentgenograms of parts thought to be affected have usually been found negative, although occasionally some spasticity of the gastrointestinal tract or of a ureter may appear. These patients in general are frequently diagnosed "malingersers" or "neurotics" at best.

A study was made of twenty cases that I or my associates examined, with especial reference

to this "viscero spinal syndrome." These were believed to be representative of this syndrome and also to be definite clinical entities. The difference in their symptomatology was found to depend mainly on the segmental area involved, and care was taken to rule out actual visceral pathology tending to manifest similar radiation phenomena. A number of other cases were considered representative, but were not followed long enough or did not offer sufficient data to be included.

Summaries of five case reports are herewith offered as typical examples of the syndrome.

REPORT OF CASES

CASE 1.—A professional man, white, age thirty-one, under observation since 1927. Complained of attacks of pain radiating along the third and fourth ribs on the right. His back felt "tired most of the time," and he disliked riding in a car for any long distances because of this discomfort. Lying down would tend to relieve him. This patient was seen in Providence, Rhode Island, by an excellent orthopedist, who fitted him with a lumbar spinal brace. The attacks of intercostal pain continued, however, and the patient began to have vague upper abdominal distress. At times the symptoms became acute and colicky in nature. He vomited (this was almost projectile, without much previous nausea) and complained of feeling the effect of "gas caught in the intestines near the stomach." He was forced to go to bed for several weeks at a time because of the pain. X-rays of the spine, gall-bladder, and gastro-intestinal system were negative except for a five-hour retention of the barium meal in the stomach. All laboratory findings at this time were negative. In quest of relief he came to California and was seen at the clinic, where a diagnosis of dorsal scoliosis was made with intercostal neuritis related to the fourth dorsal vertebra. The curvature was partially corrected by a total one-quarter inch raise of the right heel, physiotherapy, and muscle training. The upper abdominal symptoms cleared up within two weeks, and most of the intercostal pain had disappeared within a month (although relief was noted much earlier). One year later there was a moderate recurrence of symptoms and it was found that the curvature had partially returned. The addition of another one-quarter inch to the right heel and more vigorous muscle training again relieved the symptoms very satisfactorily, and the patient has remained well up to the present writing.

In referring to the patient's past history, the following points may be suggestive. In 1923 an appendectomy was performed and an essentially normal appendix was removed. The symptoms and signs of appendicitis at this time were not typical, although there was some hyperesthesia of the skin in the right lower quadrant and the patient complained of cramping pain in the right side. Two years later, in 1925, the patient developed symptoms of mild ureteral colic on the right side. These symptoms persisted off and on for three weeks, and the ureters were catheterized. A moderate angulation of the right ureter was found a few centimeters below the right kidney. Following this, no further renal colic developed, although a tired sensation was frequently noted in the right flank (a sensation which was intensely reproduced by the filling of the renal pelvis with sodium iodid).⁶

In short, then, this patient was known to have had some type of pain in his right side dating from 1923, when an innocuous appendix was removed, to 1930 when he obtained relief of intercostal pain and upper abdominal colic after orthopedic treatment of a spinal curvature.

Note: Gastro-intestinal series studied after the treatment of the scoliosis did not show abnormal retention of barium meal in the stomach.

CASE 2.—A Jewish grocery clerk, age forty-two, under observation since 1921. At this time he complained of feeling tired and weak even after sleeping well at night. A year later, 1922, he was in bed three days with pain in the right lower quadrant and marked sensitivity in this region. He did not vomit. The temperature was not recorded. In 1924 he developed an intermittent "growling pain" in the right side. This became severe and seemed to localize in the right lower quadrant and the diagnosis of chronic appendicitis was made by a local surgeon, although no operation was performed. The attack was not accompanied by vomiting. He was seen again seven years later, 1931, complaining of "cramp-like pains in right abdomen" and backache. No nausea or vomiting. Bowels regular. Roentgenograms of the gastro-intestinal tract taken at this time were negative. Referred to the orthopedic department, the patient was found to have radiation pain from a left dorsolumbar curvature, and right leg one-quarter inch short. This was corrected with rapid relief of back pain and abdominal symptoms. Up to the present study, relief has continued.

Laboratory examination of the blood and urine during the attacks of abdominal pain were essentially negative. The stools showed considerable undigested starch particles and vegetable fibers. The blood Wassermann test was negative at all times.

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CASE 3.—A draughtsman, white, age twenty-three, was first seen in November, 1930, complaining of a feeling of "emptiness in stomach," nausea, and epigastric pain. At times the pain seemed to occur as colic in the right abdomen. Appetite was good, but could not eat much because of distress in "stomach." When the pain was severe it was often accompanied by nausea. Complained of griping in intestines due to "gas." All his symptoms seemed to be aggravated in the late afternoon and evening, and had been noted for several months. He stated that much of his work was carried on while bending over a draughting board.

His chief illnesses previously consisted of a siege of "double" pneumonia in infancy and a severe attack of influenza in 1918. Otherwise he had been in rather good health up to the time of admission to the clinic.

A complete physical examination revealed no noteworthy pathologic condition except a dorsolumbar curvature and left leg one-half inch short. Laboratory reports were negative. No roentgenograms were taken.

Orthopedic relief of the curvature was instituted with almost immediate relief of upper abdominal symptoms. Two years after this correction the patient continues in good health and there has been no recurrence of pain.

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CASE 4.—A woman teacher, white, age thirty-seven. She complained of pain and tenderness in the left lower quadrant and back which had persisted for a number of years. She had been told by physicians that the pain was caused by the left ovary. The discomfort became continuous about a month before being examined at the clinic. A thorough pelvic examination revealed no pathology to account for the pain. The patient was then referred to the orthopedic department, where a left lumbar-right dorsal spinal curvature was found. Correction of the curvature brought total relief within three days. This relief has continued to the present writing, four months later.

This case does not necessarily represent the "viscero-spinal syndrome," for no differentiation was made between cutaneous sensation and that of the underlying organs. However, it is offered as a typical example of how pain in the pelvic region focuses the attention on the pelvic organs and not on external factors which may be the primary causes.

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CASE 5.—Housewife, white, age twenty-eight, first seen on August, 1930. She complained at this time of tickling in her throat and chest, cough, and difficult

breathing. This had been present for nine years. Raised a slight amount of whitish sputum. No blood. She also complained of constipation, the bowels moving with difficulty every two to three days. Patient states that she had always had a curvature of her spine and frequently suffered considerable backache. The ache was not constant and did not always remain in one spot. When it was worse her respiratory symptoms seemed to be aggravated. Her past history was essentially negative except for a miscarriage at two weeks in 1927 and a tonsillectomy prior to that. Menstrual periods were every thirty days, preceded by a week or more of "heaviness in the pelvis and dragging sensations." Urination about twelve times a day and once at night.

Examination of the lungs was negative. The heart showed no abnormality although a soft systolic blow was audible at the apex. Pelvic examination showed a mild endocervicitis. The Rubin test for patency of the tubes was negative.

Nothing was done at this time for the spinal curvature.

The patient's symptoms continued unabated for a year when an orthopedic examination was advised (December, 1931), and a right dorsal and left lumbar scoliosis was charted. The right leg was also found to be one-half inch short. This was corrected and exercises were instituted to further relieve the spinal curvature (Fig. 2).

The patient noted a definite improvement within a few weeks after the onset of treatment. Interviewed four months later she volunteered the information that her cough had practically disappeared, her bowels moved twice daily (instead of every two or three days), and the premenstrual heaviness in the pelvis was gone. She urinated about four times instead of twelve.

It is interesting to note here that this patient did not have cutaneous radiation pain. However, the improvement of the visceral symptomatology coincided with the postural improvement.

COMMENT

We find, then, regardless of any theories offered or to be offered, that the above patients with complaints of visceral disturbances and definite spinal curvatures have been apparently relieved after some correction of the spinal curvatures. It may be argued that these patients fall under the grouping of the psychalgias as described by Pratt et al.¹¹ The latter have shown that if painful areas of skin are of hysterical origin they may be permanently relieved by infiltrating the skin with procain. If the pain is due to a true viscerocutaneous condition, relief may persist only as long as the anesthetic is present. These experiments have not been carried out in our patients. However, our treatment (*i. e.*, orthopedic relief of spinal curvature) has been so different and apparently so far from the seat of trouble, from the patient's point of view, that we believe psychotherapy is not a large factor. Furthermore, if most of our patients had suffered from pure psychalgias they should have benefited by local and symptomatic treatment. This was not found to be true. For example, Case 1 had been told at the time of operation that the appendix was the probable causative factor. To all appearances, he was satisfied with this explanation, but the right-sided pain returned in spite of the appendectomy, and continued in one form or another until its disappearance on correction of the spinal curvature.

It is my belief that psychalgia may be a complicating factor, but certainly not the main element in the twenty cases studied.

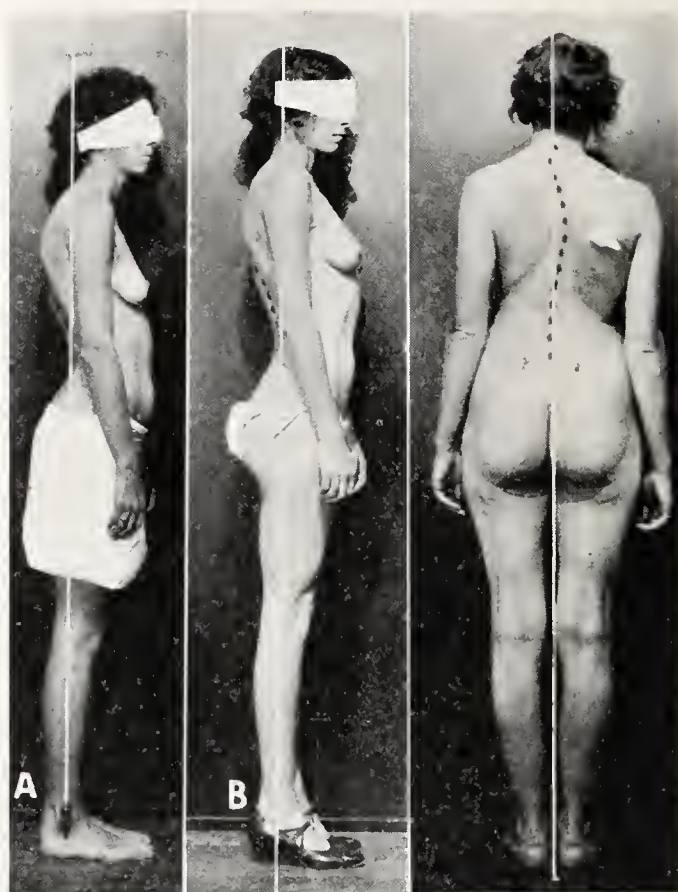


Fig. 2

Fig. 3

Fig. 2.—Showing the posture of a patient (Case 5). (a) At onset of treatment when visceral disturbances were marked. (b) After orthopedic correction of the spinal curvature had progressed for three months and the visceral symptomatology had become negligible.

Fig. 3.—Showing a typical curvature of the spine, representing a common factor in the viscero-spinal syndrome. The arrow points to the apex of the curvature in the middorsal region, often associated with radiation phenomena in the gall-bladder and epigastric regions. The patient above complained of colicky pains in the upper abdomen, indigestion, and a sense of epigastric pressure after eating. Visceral pathology was not found by clinical or x-ray examination. A partial correction of the spinal curvature resulted in complete relief of symptoms.

Certain additional factors have been noted in the viscerospinal syndrome: (1) Visceral disturbances seem to occur in direct relation to the apex of the concavity of the curvature of the spine, the concavity facing the side affected (Fig. 3). (2) The apex of the curvature often changes as the patient becomes older, and the patient's history suggests that the visceral symptoms change according to the new segmental enervation. There also seems to be some temporary correlation between any new changes in the spinal contour produced by altering or correcting the existing curvature. For example, in two cases where scolioses were treated by heel-raises the patients complained of fatigue in the lumbosacral region and constipation shortly after the correction. This constipation was of the spastic type and seemed to be felt only in the rectum and sigmoid. The spasticity, however, disappeared within a few weeks when the lower back became "strong again" and apparent adjustment had been made to the new spinal contour. (3) Fatigue seems to be an important factor in bringing on attacks of pain and visceral disturbances, and its explanation may be simple: fatigue is often accompanied by lack of muscle tone, especially noticeable in the long muscles of the back;

there may be a slumping of the figure, the patient does not stand or sit erectly; consequently any spinal curvature already present is then aggravated and may initiate the viscerospinal syndrome. This perhaps explains why certain active individuals under study remained relatively free of symptoms for varying periods of time, in spite of no treatment. When they became sedentary, lost sleep, or were overworked, their muscle tone diminished and symptoms reappeared. (4) The age factor is also of some importance. Youth compensates fairly well in spite of scolioses, kyphoses, etc. As he gets older, however, there is less ability to compensate and here again the curvature is aggravated. Arthritic changes may take place and possibly fibrotic thickening about the sympathetic fibers resulting in the physiologic disturbances already described.

CONCLUSIONS

In conclusion, it would appear necessary to be on the watch for extraneous conditions which may cause such diseases as "chronic appendicitis," "cystic ovary," "spastic colitis," and the like. It is my belief that many instances of mistaken diagnoses in this group occur either because (a) the relationship of visceral disturbances to the spinal curvatures is not recognized or (b) the curvature itself is not seen because of faulty examination methods. An examination of the body in a natural standing position is as important as the palpation of the abdomen with the patient lying relaxed on the examining table.

SUMMARY

1. Inflammation of the spinal nerve roots and adjacent nerve structures has been described as producing cutaneous radiation pain simulating visceral disease.

2. Little consideration has been given to actual physiologic changes in the viscera due to such radiation phenomena.

3. The term "viscerospinal syndrome" is suggested to describe the result produced by spinal root and sympathetic nerve irritations at various segmental levels.

4. It is herein maintained that certain spinal curvatures such as scolioses, kyphoses, lordoses, etc., may produce definite visceral symptomatology and that this is not generally recognized by the medical profession.

5. Typical examples, selected from a group of twenty, are presented. In these patients symptoms of appendicitis, gall-bladder disease, ureteral colic, and other manifestations of visceral disease were apparently relieved by some correction of the spinal curvatures.

6. It is believed that psychalgias (as described by Pratt et al.) do not fill any important rôle in these patients.

7. Fatigue, age, activity, and the apex of the spinal curvature are shown to be chief factors in the production of the viscerospinal syndrome.

8. A plea is made for the general recognition of the rôle of spinal curvatures in the production of visceral disturbances.

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DISCUSSION

WILLIAM J. KERR, M. D. (University of California Medical School, San Francisco).—I have read Doctor Ussher's paper with a great deal of interest and pleasure. His contribution will again serve to warn the profession of the dangers of faulty examination of the spine and central nervous system in suspected visceral disease. The effects of scoliosis and faulty posture on the nerve roots may be quite as important a factor in producing visceral symptoms as is hypertrophic arthritis or tabes dorsalis. The reversal of the usual viscerospinal somatic reflex may be almost as frequently seen as the well-known type if we are on the watch for it.

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F. M. POTTENGER, M. D. (Monrovia).—Doctor Ussher's paper touches upon the very interesting problem of the relationship between the nerves on the surface of the body and those which involve internal viscera.

Precedent to the discussion of this subject it is necessary to understand the afferent (so-called "sensory") nervous system. It is often stated that there are no sensory nerves belonging to the sympathetic system. This is strictly correct in that there are no sensory sympathetic fibers; but there is an afferent (sensory) system of nerves which courses with the sympathetic system, but which belongs to the somatic sensory system which takes its origin in the nerve cells in the posterior horn of the cord. The afferent nerves divide within the cord and give off many branches, running up and down, which form many synapses with other neurons in the cord. In this way each afferent nerve may form synaptic junction with many efferent neurons. These efferent neurons belong both to the visceral and the somatic systems. So we must conceive of a continuous stream of impulses coming to the cord from the somatic structures, which express themselves reflexly both in other somatic structures and in visceral structures. We likewise must conceive of afferent fibers from the viscera transmitting stimuli to the cord which again form synapses with other visceral efferent fibers and also with fibers going to skeletal structures. In this way the action of the entire organism is integrated. In this integration through the nervous system there is a correlative effect during states of physiologic health which makes all systems of the body act as a united whole.

The same system which provides for this physiologic integration provides for pathologic disturbance in structures which may be adjacent or widely separated in conditions of disease. There is no doubt that afferent impulses from the surface of the body may

be transmitted to internal viscera, and if sufficiently strong produce pathologic function. On this basis the relief of a nerve irritation caused by scoliosis, as discussed in Doctor Ussher's paper, may be a means of relieving pathologic function in internal viscera.



LEWIS GUNTHER, M. D. (913 Pacific Mutual Building, Los Angeles).—In 1928 Dr. William J. Kerr and the writer showed that osteo-arthritis of the spine could be the cause of pain at the periphery which closely simulated visceral disease. Confusion in diagnosis of visceral disease becomes a natural consequence, since the distribution of the pain in osteo-arthritis follows the dermatomes of the roots of the spinal nerves, and the Head zones of visceral pain also occur within the distribution of the roots of the spinal nerves. Methods for the clinical recognition of the pain of nerve root origin were described.

The medical literature has been slowly but increasingly affording recognition of the painful disturbances associated with spinal arthritis. However, as Doctor Ussher has pointed out, the possibility of visceral disturbances being reflexly originated by pathologic processes in the spine has received little or no consideration.

The possible sensory reflex reactions in the viscera, according to Doctor Ussher, would be described by the patient as "colicky pain, a sense of fullness, inability to draw a full breath, gas cramps, etc." He also demonstrated by his thorough studies that such symptomatology was associated with and could be attributed to pylorospasm, spastic states of the colon, or to partial ureteral obstructions also due to spasm of the ureter. It is a striking feature indeed (in all but one of the case histories presented) that although the word pictures painted by his patients were descriptive of symptoms that are more commonly associated in our minds with disease of the hollow viscera the distribution of the subjective painful sensory disturbances was along the dermatomes of the roots of the spinal nerves, and by their distribution they constituted a radiculitis.

In our original descriptions of the radicular syndrome are also to be found terms often used by patients in describing symptoms of visceral disease, *viz.*, burning, tingling, heaviness, pressure, stabbing pain, and gas. These we described under the heading of "nerve root paresthesias." These were distributed strictly according to spinal root dermatomes. Their frequency of occurrence, however, showed a much smaller incidence than the symptoms purely descriptive of root pain. In our effort to attain an understanding of the patient's language when telling of his symptoms, we were satisfied at the time to place the group of terms descriptive of visceral disease under the heading of a radiculitis because they followed the typography of the spinal nerve roots. According to our major premise, sensory disturbances which show by their distribution that the primary disease process is in the spinal root and not in the tracts, nuclei of the cord, or in a peripheral nerve trunk, constitute a radiculitis rather than the viscerosensory reflex of visceral disturbances.

Doctor Ussher's work has shown that sensory disturbances at the periphery of a radicular distribution may also be concomitant with spasms of the various hollow abdominal viscera. How is one to differentiate pure nerve root sensory pain and pure visceral disease pain in nerve root areas referred through Head zones from nerve root pain due to spinal disease and associated with spasms within the viscera which also give rise to symptoms?

Our criterion for the differentiation of radicular pain due to disease in the spine from Head zones of referred pain due to a diseased viscus which may also be referred within the same nerve roots as the radicular pain are as follows: Whether one accepts the viscerosensory reflex theory of Mackenzie or the peritoneo-cutaneous reflex theory of Morley, the fact nevertheless remains that pure Head zone pain which is associated with visceral disease rarely involves the entire cutaneous distribution of the nerve root dermatome.

On the other hand, the radicular pain of spinal disease always involves the entire distribution of the spinal dermatome. The Head zones of subjective sensations in visceral disease are poorly defined, whereas the radicular pains of spinal disease are accurately delineated. Memory for the former is poor, and sharp for the latter. The patient can accurately delineate radicular pain even many years after it has subsided. To this differentiation now must be added Doctor Ussher's syndrome. Doctor Ussher's spinovisceral syndrome describes symptoms commonly descriptive of visceral disease and root pain are associated with spinal curvatures and are concomitant with spasms of the hollow viscera. These symptoms depend on the nerve roots that are involved. Doctor Ussher is to be congratulated for calling the attention of the profession to this syndrome.



DOCTOR USSHER (Closing).—Since compiling the above report of cases, presenting visceral symptomatology related to spinal curvatures, twelve new cases have been observed in our group. These, we believe, conform to the postulates of the "viscerospinal syndrome" and offer still further data, especially in the field of bronchospasm and asthma. This series will be discussed later.

A question was asked by Doctor Gunther as to the differentiation between pure nerve root sensory pain due to spinal disease and pure visceral disease pain referred to corresponding spinal segments. I believe this differentiation may often be made by a careful neurologic examination assisted by roentgenograms of the spine. In any case visceral pathology must be ruled out by the usual methods of differential diagnosis.

PERNICIOUS ANEMIA—MAINTENANCE DOSE OF LIVER EXTRACT NECESSARY*

By HENRY GIBBONS, III, M. D.
San Francisco

APPROXIMATELY two years ago the value of the treatment of pernicious anemia by intramuscular injections of liver extract became generally recognized.^{1, 2} The question arose concerning the maintenance dose in the average case. Is it true, as suggested,³ that one injection a month is sufficient for most cases? Just how intensively should certain cases be treated? It was believed that regular intramuscular injections of liver extract were much less expensive for the patient than liver extract by mouth. This method is certainly less objectionable than eating daily portions of liver.

PROCEDURE USED IN THIS STUDY

In order to evaluate the various new forms of treatment of pernicious anemia, the following course was adopted. In January, 1932, all cases of pernicious anemia being treated in the Lane Out-Patient Medical Clinic were instructed to stop eating liver, kidneys, and sweetbreads and not to take any more liver extract by mouth. Arrangements were then made to have the patients report at frequent intervals for a red blood count and a hemoglobin determination. Whenever the hemoglobin fell below 80 per cent (Sahli), an injection

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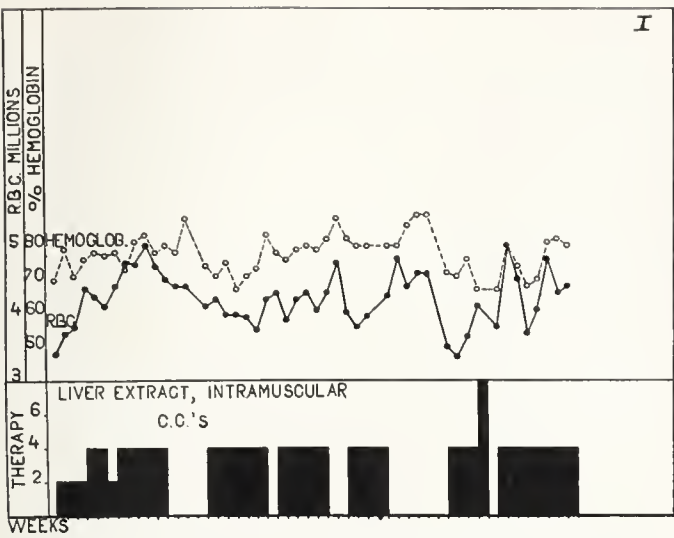


Chart 1.—Weekly record of red blood count and hemoglobin determinations in a patient receiving intramuscular injections of Lilly's liver extract. Unless 4 cubic centimeters are given once a week a normal blood count is not maintained.

of liver extract was given intramuscularly. Of course, if any symptoms of weakness or numbness of the extremities developed, this plan could not be so closely adhered to. In two cases, "Extralin" by mouth was given.

GROUPING OF THE PATIENTS STUDIED

Twenty-one cases were followed. In following these patients, one cannot help getting the impression that there is a natural reservoir of a certain potent material in the body which must be kept filled to the brim at all times, else symptoms of pernicious anemia develop.

Three of these patients were shown to require regular weekly injections of Lilly's Liver Extract 343 for intramuscular injection in 4 cubic centimeter amounts. Chart 1 illustrates the response of one patient of this group and how this fact is arrived at. Two cubic centimeters weekly injections do not seem quite adequate at the onset. The dose, therefore, is increased to 4 cubic centimeters a week. After eleven weeks of regular injection, these are stopped because the blood count and hemoglobin are normal. Three weeks later the hemoglobin drops below normal and injections are resumed. It will be noted that there then is a slow but gradual rise of blood to normal again. Subsequently, whenever treatment is stopped there is this same sequence of events. The conclusion is that 4 cubic centimeters a week is the minimum on which this patient can get along. Whether 8 cubic centimeters every two weeks are just as effective has not been determined. On this regular weekly treatment the blood count and hemoglobin have remained normal for six weeks.

Two other patients receiving this same form of treatment have not required liver injections very often. At times their hemoglobin is below 80 per cent (Sahli); nevertheless they have no symptoms. A prompt response following each injection of 4 cubic centimeters always occurs. In the case shown here (Chart 2 a), the shortest interval between injections is five weeks, the longest thirteen weeks. It appears that one injection a month is quite sufficient as a maintenance dose. This

cannot be carried out any longer in this case because of severe reactions coming on one-half hour after the last two injections and lasting for from one-half to one hour. The signs and symptoms of the reaction are nausea, vomiting, sweating, flushing of the skin, rapid pulse, fall in blood pressure, and weakness. A similar reaction occurred in one other case. It is noteworthy that in both instances the injections are more widely spaced than in the other cases treated. This suggests an allergic reaction due to protein sensitization from previous injections. This patient is now doing well on six capsules of "Extralin" daily.

The next group of four cases were followed for from six to twelve months without the need of any liver whatsoever. They are evidently in a remission. They will be carefully followed for the onset of a relapse. Chart 2 b is a record of one case.

Four other patients have neurologic symptoms. The purpose is to treat them intensively. One patient reports two times weekly for an injection of 8 cubic centimeters of Lilly's Liver Extract 343. A longer interval between injections has been tried, but without success; weakness of legs is noticed. Another patient does well on 2 cubic centimeters every two weeks. Another receives

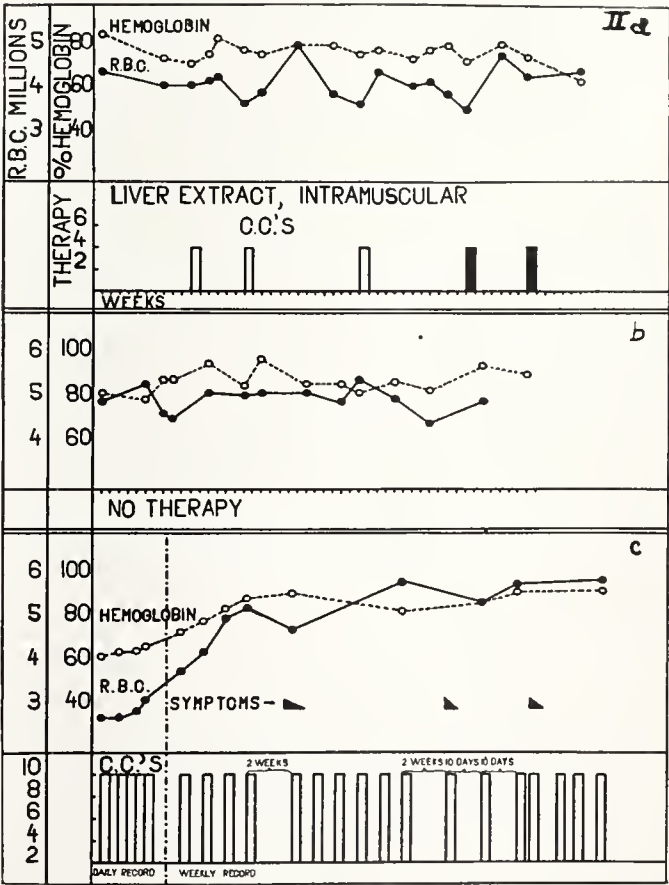


Chart 2 (a).—In this patient 4 cubic centimeters of liver extract produces a response in blood count in all except the last injection, which is complicated by a histamin-like reaction one-half hour afterward. One injection a month will apparently maintain a normal blood count. Because of reaction to injections, the patient is now taking "Extralin" by mouth.

Chart 2 (b).—This patient is in a remission and does not require any liver to maintain a normal blood count.

Chart 2 (c).—This patient with neurologic symptoms responds well to intensive intramuscular liver therapy at the beginning. Although blood count remains normal, symptoms recur unless regular weekly injections of 10 cubic centimeters of liver extract are given.

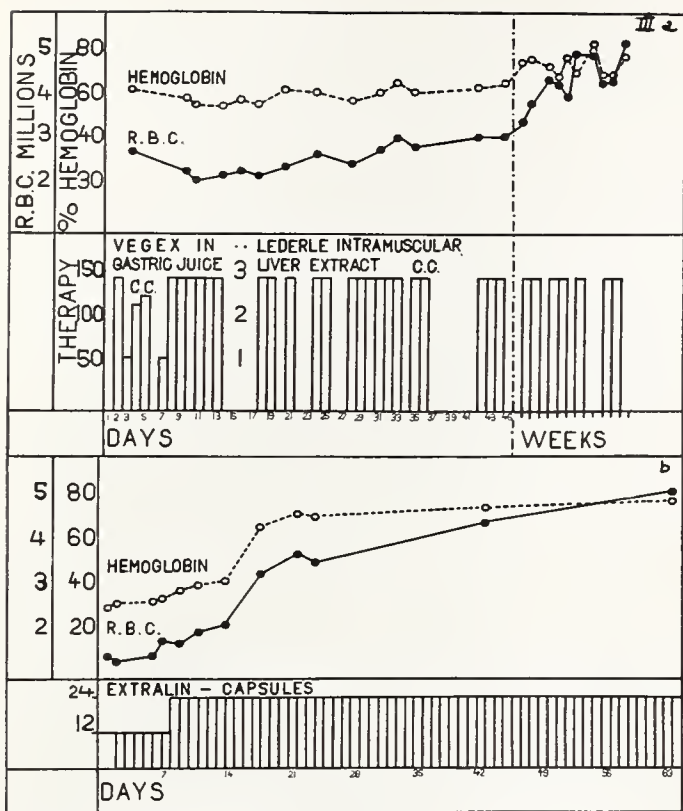


Chart 3 (a).—This patient has no response to predigested vegex by mouth and responds very slowly to frequent injections of 3 cubic centimeters of Lederle's liver extract. It appears as though one injection a week will maintain a normal blood count.

Chart 3 (b).—Twelve capsules of "Extralin" a day are not sufficient to produce a response in this patient. Twenty-four capsules daily do. Now that a normal blood level has been reached, the maintenance dose is probably much less than twenty-four capsules a day, however.

3 cubic centimeters of Lederle's liver extract every week, with marked improvement in weight and strength. Chart 2 c illustrates the response of a woman of forty-nine who developed pernicious anemia and combined sclerosis in July, 1932. A satisfactory response is obtained with intensive intramuscular treatment at the onset. Then it is found that 10 cubic centimeters a week are necessary to keep the patient symptom free. When a two-week interval is attempted, she begins to feel weak and has numbness of the lower extremities. Even a ten-day interval seems inadequate. The patient is now doing very well on weekly injections. It will be noted that the blood count is no final index of treatment in a case with neurologic disturbances.

Two other patients did not respond well to large amounts of liver by mouth—the so-called "liver-resistant" cases. They have responded slowly to intramuscular injections. In the case here illustrated (Chart 3 a), twelve days' trial of Castle's⁴ formula of 15 grams of vegex digested in 150 grams of gastric juice does not cause any response. Injections of 3 cubic centimeters of Lederle's liver extract nearly every day for about three weeks produces a gradual response. It seems now, from weekly observation, that 3 cubic centimeters a week of this extract is the maintenance dose here.

The last two patients received only Extralin by mouth. Twelve capsules a day are inadequate, as shown in the first week's treatment (Chart 3 b), but twenty-four capsules daily produce results.

It is difficult to determine the relative potency of liver and the various liver preparations because, as Minot⁵ says, at present there is no satisfactory way of defining a unit of potent material. It is said that one vial of oral liver 343 when taken, although an extract of 100 grams of fresh liver, is actually only equivalent to about 80 grams in potency. Minot⁵ has made the statement that parenteral liver extract (343) is equivalent in its effect to at least thirty times the amount of fresh liver, from which it is extracted. Thus, extract from 50 grams of fresh liver when given intramuscularly should give a response equal to 1500 grams by mouth. Gänsslen⁶ gives comparative doses, which seem to indicate that the potency of the extract is even greater—fifty or sixty times that of fresh liver by mouth. In a rough way the potency has been confirmed in the first case. The patient represented in Chart 1 was doing well on one vial of 343 by mouth daily before starting intramuscular treatment. He now does well on 4 cubic centimeters of liver extract intramuscularly each week. Now, one vial a day = seven vials a week = about 600 grams of fresh liver. Thus, the response from 4 cubic centimeters liver extract, an extract from 20 grams of fresh liver, is equal to the response from 600 grams of liver by mouth or about thirty times greater than if taken orally.

A rough estimation of the potency of "Extralin" can be obtained by the following reasoning. Minot stated⁷ that "on the average when liver extract derived from 500 to 600 grams of liver has been fed daily to patients with less than two million red blood cells per cubic millimeter of blood, it has increased the concentration of these cells about 2.5 million per cubic centimeter in thirty

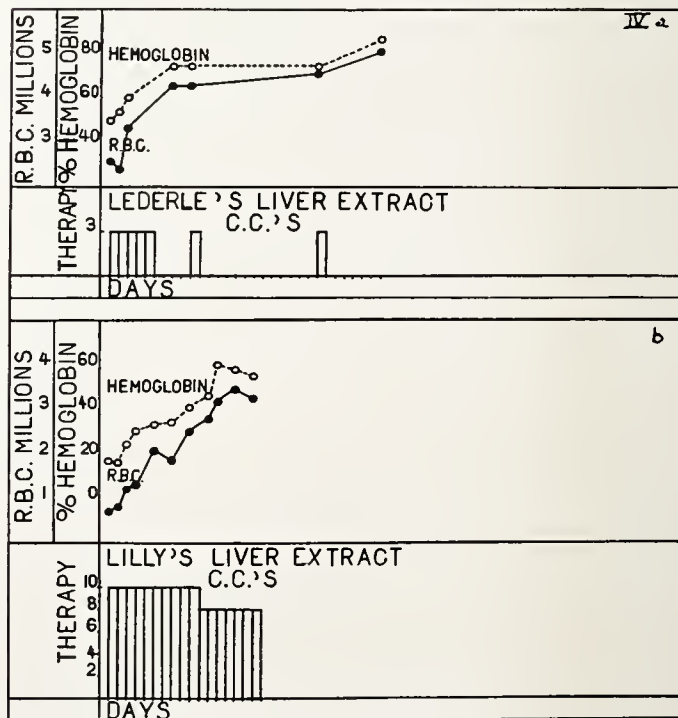


Chart 4 (a).—This illustrates response of patient receiving 3 cubic centimeters of Lederle's liver extract for comparison with response to one receiving 10 cubic centimeters of Lilly's liver extract in Chart 2 (c). Both start out at the same blood level and receive six and eight injections respectively, indicating that Lederle's extract of 100 grams of liver is not two times as strong as Lilly's extract of 50 grams of liver.

Chart 4 (b).—Normal blood response and example of beginning treatment in a case of pernicious anemia.

days." This response is obtained (Chart 3 *b*) in the patient who received twenty-four capsules of "Extralin" daily. Twenty-four capsules of "Extralin" are, therefore, roughly equivalent to 500 grams of liver.

In addition, it has been noted that the response of a patient to 3 cubic centimeters of Lederle's liver extract (which is an extract from 100 grams of fresh liver) does not seem to be much greater than 10 cubic centimeters of liver extract 343 (Chart 4 *a*). In this case, Chart 4 *a*, a rise of two million red blood cells occurs as a result of six injections of 3 cubic centimeters of Lederle's liver extract. Eight injections of 10 cubic centimeters of Lilly's liver extract cause a similar response in the patient whose record is shown in Chart 2 *c*. From this comparison it does not seem that 3 cubic centimeters of Lederle's extract (an extract from 100 grams of liver) is twice as potent as Lilly's extract (an extract from 50 grams of liver). The reason for this must be that "when extracts are made there is considerable loss of potent material, and the purer the potent material has been rendered the greater the loss of active principle."⁵ The variation of response of individuals is a factor, also, and therefore the absolute relative potency cannot be determined from these observations.

RELATIVE VALUES WHICH ARE SUGGESTED

From the data gathered in the treatment and observation of this small series of cases, the following relative values are suggested.

One vial of Lilly's Liver Extract 343, intramuscular, containing 10 cubic centimeters of extract from 50 grams of fresh liver is equivalent to 1500 grams, or three pounds of fresh liver toward producing a response in a case of pernicious anemia. One vial of Lederle's liver extract may possibly be equal to this in potency. It must be "remembered that the fact that any particular extract is derived from a given amount of liver does not guarantee that it retains the potency of that amount of liver." Seventy to eighty capsules of "Extralin" are equivalent to three pounds of liver. These in turn are equivalent to fifteen vials of Lilly's 343 by mouth.

An important point in the beginning of treatment of a patient with pernicious anemia now presents itself. It has been observed that 500 grams of fresh liver will produce a rise of 2.5 million red blood cells per cubic millimeter in thirty days. Ten daily injections of 10 cubic centimeters of 343 is equivalent to this amount of liver. A rise of 2.5 million red blood cells has been produced in ten days by this form of treatment (Chart 4 *b*). Therefore, intensive therapy of at least ten injections of Lilly's 343 seems the best initial treatment for all cases of pernicious anemia. When the blood count becomes normal the case then becomes an individual problem in regard to a maintenance dose.

The relative cost of materials is as follows: Three pounds, 1500 grams, of liver usually cost about \$1.80. Fifteen vials of oral 343, its equivalent, cost \$3.75. One bottle of eighty-four "Ex-

tralin" capsules costs \$3.50; this is equivalent to a little over three pounds of liver. One vial of 343 costs \$1.75, and one vial of Lederle's liver extract costs \$1.10. So, intramuscular liver extract is the cheapest except that additional cost to the patient for treatment must be taken into consideration unless the patient is able to administer the substance himself. Unless this is so, fresh liver is really the cheapest form of treatment. Because of the undesirability of constantly taking liver, the oral preparations have been substituted. "Extralin," also, is very satisfactory. When a patient with pernicious anemia has attained a normal blood picture, being free from neurologic disorders, twelve or even six capsules a day will probably be a sufficient maintenance dose.

The possible explanation of the variation of the maintenance dose in pernicious anemia is that the patient himself produces variable amount of effective substance at different times. This is known to be so from old observations before the days of specific treatment when there were relapses because of depletion of the effective substance, followed by remissions.

CONCLUSIONS

1. No patients in this group have failed to respond to intramuscular liver therapy.
2. Intensive intramuscular liver therapy at the onset seems desirable, although not absolutely necessary, in all cases of pernicious anemia.
3. There is no uniform maintenance dose for all cases, but each patient should be treated as an individual problem and an effort made to give enough potent material at sufficiently frequent intervals to maintain an optimum nutritional state.²
4. This can most conveniently be accomplished by prescribing capsules of "Extralin" and, since the actual "maintenance dose" is quite difficult to determine accurately, it is more practicable to give a little larger dose than is absolutely necessary.
5. Reactions have occurred following intramuscular injections in two patients in whom the injections have been widely spaced.

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THE LURE OF MEDICAL HISTORY*

JOHANN SIGISMUND ELSHOLTZ
(1623–1688)†

CLYSMATICA NOVA (1665): ELSHOLTZ' NEGLECTED
WORK ON INTRAVENOUS INJECTION

By ETHEL GLADSTONE
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I

INTRODUCTION‡

A NEGLECTED contributor to the interesting experimentation of the seventh decade of the seventeenth century on blood transfusion was Johann Sigismund Elsholtz, state physician to the Great Elector. While Elsholtz himself did not perform actual transfusions, he nevertheless made important experiments on intravenous injection in animals and in humans, and he discussed quite thoroughly the contemporary problems involved in transfusion.

Elsholtz was born in Frankfurt in 1623 and studied in Wittenberg and Königsberg. While a young man he traveled in Holland, France, and Italy, and practiced medicine in Padua in 1653. Later he returned to Berlin, where he entered the service of the Great Elector. He apparently had the opportunity to do considerable medical experimentation and he wrote rather extensively. He died in Berlin in 1688.

Elsholtz' chief publications were the following:
Anthropometria, Padua, 1654; second edition, Frankfurt, 1663.

Flora Marchica, Berlin, 1663.

Clysmatica Nova, Berlin (Germany), 1665;
Berlin (Latin: illustrated and enlarged),
1667.

Historia steatomatis resecti, Berlin, 1666.

Destillatoria curiosa, Berlin, 1674.

De Phosphoris, Berlin, 1676.

Dieteticon, Berlin, 1682.

The *Clysmatica Nova* contains an important discussion of contemporary work on blood transfusion, and presents his own experimental studies on intravenous injection in detail. It is noteworthy that Elsholtz attributes all the interest in this connection to Harvey's demonstration of blood circulation. Medical historians generally give to the English workers all the credit for experimental work on intravenous injection and blood transfusion. But Elsholtz' report on this subject, which first appeared in 1665, indicates how widespread interest in this field really was. Extensive comment might be made on various aspects of Elsholtz' discussion, but it speaks well enough for itself. A translation of the second edition of the *Clysmatica Nova*, with its quaint illustrations, is offered herewith.

C. D. L.

*A Twenty-five Years Ago column, made up of excerpts from the official journal of the California Medical Association of twenty-five years ago, is printed in each issue of California and Western Medicine. The column is one of the regular features of the Miscellany Department of California and Western Medicine, and its page number will be found on the front cover index.

†From the University of California Medical School Library.

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Fig. 1.—Engraving of Johann Sigismund Elsholtz (1623–1688) taken from the frontispiece of his *Anthropometria*, Frankfurt, 1663. (From a copy in the University of California Medical School Library.)

ELSHOLTZ' "CLYSMATICA NOVA" *

Chapter I. *Newest Discoveries of Anatomists.* As everyone is aware, certain arts known of old have been lost to us; and others, unknown in past times, have been discovered. Guido Pancirollus has collected many of these into an elegant book entitled "Things which have been lost and recently discovered." The works of Henry Salmuth add much light to this volume. It is without my province to repeat all of these disclosures here; I intend to keep within the bounds of anatomy, and shall merely refer briefly and without elaboration to those which come within my scope.

In 1622, Gaspar Asellius, professor at Pavia, first discovered the lacteal or chyloferous veins of the mesentery. In 1651, John Pecquet, in France, noted that the lacteals are not found so much in the mesentery; but from their receptaculum a canal extends upward to the duct of the vertebrae, and is attached to the left axillary vein. Bartholomew Eustachius, an extraordinarily gifted and industrious anatomist, in the last century saw this canal in horses, and described it. I wish here to defend his just and deserved claim to the glory of this discovery.

* Editor's Note.—The translation which follows is by Ethel Gladstone.

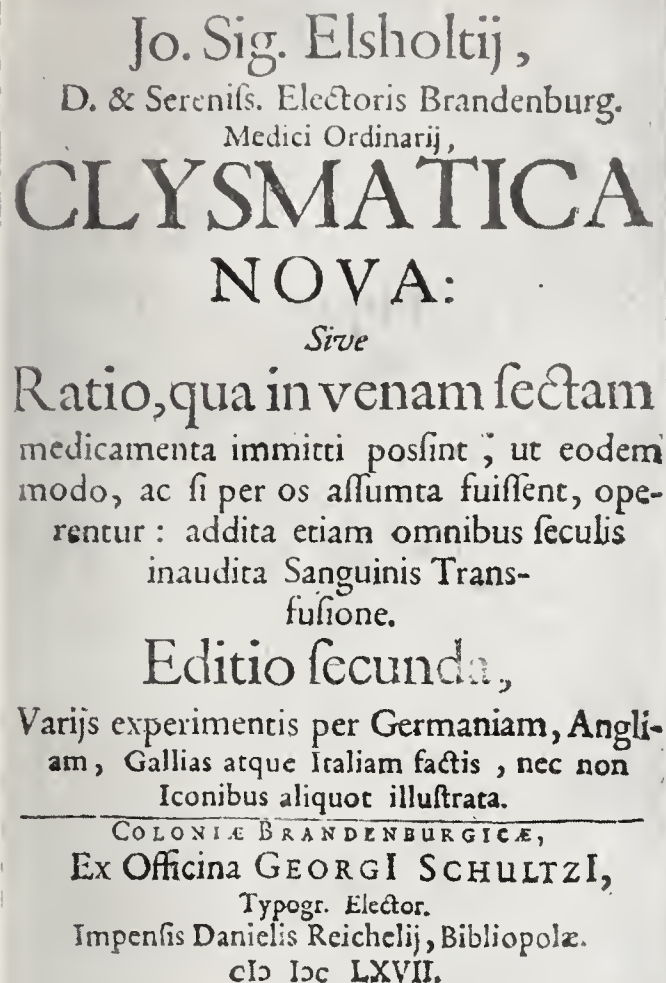


Fig. 2.—Title-page of the revised second (first illustrated) edition of Elsholtz' *Clysmatica Nova*, Berlin, 1667. (From a copy in the University of California Medical School Library.)

For in his book, "The Vein without a Counterpart," which he published at Venice in 1565, in Chapter XIII, Eustachius makes mention of a certain great branch which arises from the jugular vein, goes down along the sides of the body next to the vertebrae, passes through the diaphragm to the loins, and, becoming wider, stops in an obscure position, which is not adequately clear to him. But since everyone is not acquainted with his book, I shall give the complete text.

"And so," he says, "in those animals, from this remarkable left jugular trunk, in which the posterior seat of the root of the internal jugular vein is located, a certain great branch germinates, which at its source has to form a semicircular opening. It is white and full of a watery fluid. Not far from its beginning it is divided into two parts which, a little farther on, join together again, and have no branches. It goes next to the left side of the vertebrae, crosses the diaphragm, and is carried downward to the middle of the loins, where it becomes wider, and comprises a great artery. Finally it stops in a very obscure position which I have not yet seen well."

Certainly neither Pecquet himself, nor anyone else, could describe the thoracic duct with clearer words. The sole difference is that Pecquet made a skillful investigation of that obscure termina-

tion, which Eustachius had not yet seen clearly. Commencing with this ending, Pecquet worked back up in inverse order to the jugulars. Therefore the credit for the first discovery of this duct should in common justice be given to Eustachius: while credit for the secondary investigation alone, which was made in our time, is due to Pecquet.

A little later, in 1652, Thomas Bartholinus, honorary professor to King Hasnia of Denmark, and in the following year Olaus Rudbec, published their books about the lymphatic vessels, which are full of a watery and serous fluid, and which extend throughout the entire body. Later, students of anatomy made a more accurate study of these vessels; and very recently, in examining the lymphatics, John Hornius, professor at Leipsic, Nicolos Steno of Denmark, and Ludovic de Bils of Rotterdam, proved the truth of these investigations.

De Bils also discovered, or rather attempted to discover, a method of embalming corpses: not so much that they might last many years without decay, like mummies, but so that their intestines, muscles, veins, and other separate members, might all be distinctly seen at the same time.

Moreover, I shall not publish here what Thomas Warton, Thomas Willis, Nathaniel Highmore, Laurence Bellini, and Reinerus Graessius have gradually found out in recent times about the glands, the pancreatic lymph, the tear and salivary ducts, the structure of the kidneys, the brain and nerves, the organ of taste, and other similar matters.

But, undoubtedly, among the remaining discoveries of the century, there is no theory more useful than that of William Harvey, doctor to the king of England, about the circulation of the blood, which he brought forth nearly forty years ago. He showed that, in man as in animals, blood is diffused from the heart through the arteries into the entire body, and the separate parts of it; and that it passes back from the different members through the veins into the heart. Moreover, this movement is swift, and continues as long as life lasts.

It is clear that this theory is sound in itself and has no need of many arguments or more ample demonstration. Nevertheless there are some who refute it in their published works, as Aemilius Parisanus, a Roman doctor, Hieronymus Franzosius of Verona, and Jacob Primrose of England.

Chapter II. *Occasion for the Invention of the New Clyster.*—In addition to this earlier work, and to the foundation already laid by Harvey, I myself showed spectators a new and indubitable proof when in 1661 I subjected to the anatomical knife the body of a woman of Borolinus (Berlin), who had been drowned in the sea. First, I applied a very narrow ligature to her right forearm, under the deltoid muscle; that is, in the cavity where the fonticuli are found. Next I laid bare the descending axillary artery on this side of the ligature and with a scalpel made an opening big enough so that the fine point of a sufficiently large syringe could be inserted. Then I introduced

through the artery about one pound of warm water and immediately all of the veins on the farther side of the ligature filled up and became swollen, especially those in the elbow. From these I selected the median and ordered it to be opened by an assisting surgeon. Then we carefully examined the water which came out after it had been mixed with the blood stream; although we made several injections, nevertheless pure water always came out.

Certainly the circulation of the blood is plainly shown by this demonstration. For unless there were a network of vessels in the extremities of the body, and unless the valves of the veins had access to the heart, both going to it and returning from it, it could not happen that water injected in an artery should come out through a vein. Conversely also, from this same arrangement of the valves it is likewise clear that water injected in a vein could not come out through an artery.

Although I had not then made this experiment except on a corpse, nevertheless from that time on I deliberated more often about whether in a living being, too, injection through a syringe could be brought safely to some conclusion. But since the arteries run more deeply, and in a living being cannot be opened without danger, I left these aside and began to plan about the veins alone.

First I considered those which are more exposed in the limbs and which generally swell in disease. For I reasoned with myself in this manner: If a tankard of wine is poured into a river, the wine, together with the water, flows into the sea. In just the same way whatever liquid is injected into a vein must necessarily reach the heart, together with the circulating blood. The liquid which has flowed in cannot bring about such a change in the heart, as it is naturally intended to cause. The heart deflects that change through the arteries into the limbs, and on this account the whole body undoubtedly undergoes some type of alteration.

Nevertheless, this seemed an arduous work and one scarcely to be attempted in man, unless it were first tried out on animals. Therefore I decided to begin with dogs; what I first determined from them and how I brought these conclusions to use with men, will be shown in the following chapters.

(To be continued)

Death of William Sterling.—William Sterling, known all over the English-speaking world for his part in the production of "Landois and Sterling's Physiology," has died at his home in Manchester. Born in 1851, he was educated at the University of Edinburgh. He worked abroad at physiology and histology under distinguished teachers—at Leipzig under Ludwig, Kroecker and Fleschig, and at Paris under Ranvier, the histologic neurologist. He was a successful teacher and author. His "Outlines of Practical Physiology" appeared in 1888 and "Outlines of Practical Histology" in 1890, an American edition appearing in 1902. But it was his translation of Landois' Physiology that made him widely known. His emendations and additions to this great work were so extensive that he was rightly regarded as a co-author rather than a translator of the book.—*Journal of the American Medical Association*, October 29, 1932.

CLINICAL NOTES AND CASE REPORTS

CONGENITAL HEART-BLOCK *

By LEONARD H. GREENBAUM, M. D.
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THIRTY-FIVE accepted cases of congenital heart-block are on record in the literature.¹ Von Starck,² in 1903, reported the first case, but he did not take a graphic record. It was not until 1908 that Van den Heuvel³ reported the first graphically proved case of congenital heart-block.

In 1920 Howland and Carter⁴ first reviewed the literature, collected seven cases and added one of their own. In 1926 Wilson and Grant⁵ reported the fifteenth case of congenital heart-block in a cor-biatrium-triloculare heart, together with the first complete histologic study. This was the first autopsied case reported. In 1929 Yater⁶ reviewed the literature and collected thirty cases, including one of his own. Since 1929 five additional cases have been reported, a total of thirty-five. Twenty-five are of the complete block type.

As to the time of recognition of heart-block, two of the reported cases were recognized prenatally. The first, that of White, Eustis and Kerr⁷ exhibited an irregular heart eight hours before birth. The second, Yater's case: the heart was found to be slower than the maternal heart two weeks before birth. Nine others were recognized during the first year. Congenital heart block may be present without discomfort, without symptoms. Syncopal attacks with heart-block (Stokes-Adams syndrome) are seen infrequently with this condition. The existence of congenital heart-block in two members of the same family has never been proved.

Theoretically congenital heart-block may be explained in two ways:

1. Prenatal endomyocarditis or lues, involving the bundle of His. (This has never been proved.)
2. Developmental defects affecting the His bundle.

The two cases coming to necropsy, studied histologically, demonstrated the latter defect.

Diagnosis.—The diagnosis, clinically, is seldom difficult; usually bradycardia and a loud mid-precordial murmur are present. However, neither are pathognomonic and either or both may be absent and complete dissociation exist, as shown in the case reported by Nicholson⁸ in a child of twelve months who had a ventricular rate of 104 and more.

Cyanosis and clubbing of the fingers and toes are infrequent and usually denote a complex anatomic lesion. The presence of several congenital

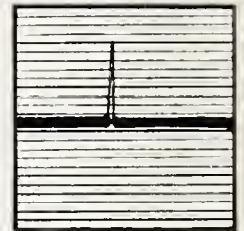


Fig. 1.—10 millimeter calibration of beam.

* Read before the staff of the Children's Hospital, Los Angeles, March 10, 1932.

anomalies in the child with congenital heart-block is frequent. The absence of a history of infection causing acquired heart-block is important. Diphtheria, pneumatic fever, chorea, and congenital lues are the diseases which most frequently produce acquired heart-block.

Prognosis.—Congenital heart-block itself is not a progressive condition and the prognosis usually depends on the efficiency of the circulation rather than on the block *per se*. Sudden death, however, occurs at times due to further interference with the conducting passage, with resultant ventricular failure. Death from intercurrent infections is frequent. A rather poor prognosis would seem to be indicated on the basis of the cases reported, since the oldest was twenty-three years and only nine others were above ten years. However, the less complicated the congenital condition the better the prognosis, regardless of the age.

REPORT OF CASE

D. W., a female infant, age three months, was examined on February 3, 1932, as part of feeding care routine.

Family history is important in that the paternal grandfather is a cardiac, and congenital defects, herniae, are known to have been present in the past four generations. There was no knowledge of lues or miscarriages. A brother of the patient, age three and one-half years, is living and well.

Past history was that of a normal full-term delivery without postnatal cyanosis, snuffles, hemorrhage or desquamation, and progress, while a bit slow, has been satisfactory up to this time. Discomfort associated with bilateral femoral herniae has been the only abnormality.

The birth weight was 2834.9 grams (6¼ pounds). The child was breast fed for one month only, weaned because of insufficient breast milk. A cow's milk formula with added karo syrup was substituted and is being taken at the present time. Orange juice and cod-liver oil were added during the second month.

Examination.—Physical examination disclosed a small infant only fairly well nourished. The superficial scalp veins were prominent, the skin pale and dry. The mucous surfaces and nail-beds were of normal pink color though slight cyanosis followed crying. There was neither clubbing of the fingers or toes nor thickening at the base of the nails. On both sides over the femoral openings bulgings were noted. The lungs were normal. On examining the heart no precordial pulsation was noted and no shock or thrill was palpated. Cardiac dullness was markedly increased, measuring five centimeters from the edge of the sternum in the fourth interspace on the left and two centimeters to the right in the third interspace. The sounds at the base were slightly accentuated, the second pulmonic sound the greater. At the apex both sounds were loud, the second more accentuated. Here a third sound was heard, at times seemingly a reduplication or rebound of the second sound and of only slightly lessened intensity. A loud blowing systolic murmur was heard over the entire precordium, more marked in the fourth left interspace near the sternal margin. The rate at the apex was slow, sixty-two to the minute.

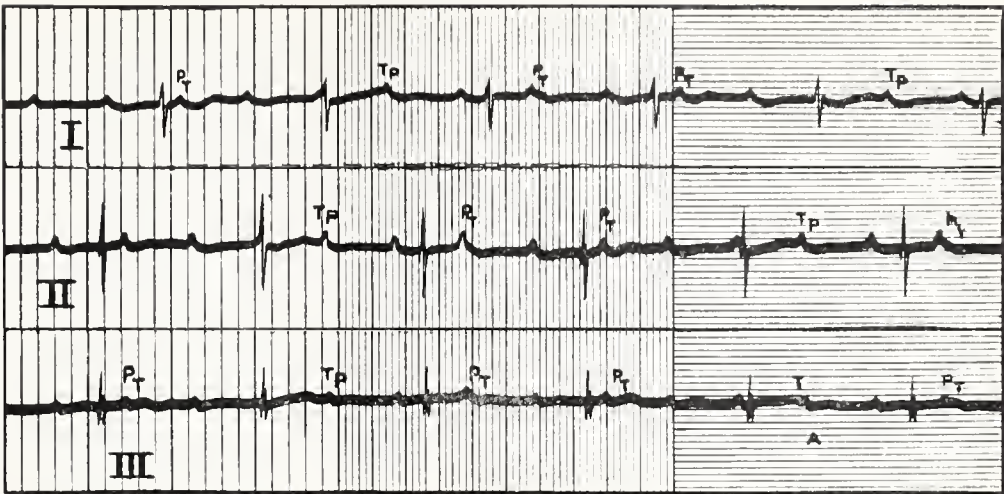


Fig. 2.—Complete dissociation in all leads; approximately a 2 to 1 block.

At other examinations it varied between sixty-two and seventy. The liver and spleen were not palpable.

Laboratory Examinations.—The Wassermann and Kahn reactions on both mother and child were negative.

Blood count: Hemoglobin, 80 per cent (Dare); red blood cells, 4,070,000; white blood cells, 9,900.

Differential count: Polymorphonuclears, 26 per cent; lymphocytes, 56 per cent; monocytes, 5 per cent; eosinophils, 2 per cent; basophils, 1 per cent.

Urinalysis was negative. The Mantoux test was negative.

X-ray of the heart showed it to be of the globular type, enlarged both to the right and left. The measurements were:

TDCW	10.9
MR	2.4
ML	4.8
Total	7.2

The electrocardiogram showed the presence of complete auriculoventricular dissociation with an auricular rate of 150 and a ventricular one of 70 per minute.

The absence of a history of infection, the age of the child, plus the existence of a bradycardia, a murmur, and enlargement (verified by x-ray), together with the electrocardiographic findings, present clear-cut evidence of congenital heart-block.

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BACILLUS PROTEUS SEPTICEMIA*

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BLOOD-STREAM infections due to *Bacillus proteus* are uncommon, only ten cases having been reported in the literature. Infections of the urinary tract due to this organism, however, are less rare. Kretschmer and Mason¹ of the Presbyterian Hospital in Chicago showed that, out of three hundred and five consecutive urinary-tract infections, other than tuberculosis, eight cases showed this bacillus in pure culture, and in twelve cases where more than one organism was recovered.

In reviewing the literature of *Bacillus proteus* septicemia, Kretschmer and Mason¹ reported two cases, one patient having a stone in the kidney and the other having renal tuberculosis with a small stone in the pelvis of the kidney. Both of these cases recovered.

Warren and Lamb² cited a case in which their patient had, besides the proteus septicemia, pulmonary tuberculosis, myelogenous leukemia, and Vincent's angina.

Kernan³ made mention of two cases in which the organism was recovered from the blood following ear and throat complications. One patient's illness began as a peritonsillar abscess, terminating fatally as a sinus thrombosis and meningitis; the other patient's illness apparently started with a discharging ear, progressing to a lateral sinus thrombosis and death.

In the following two cases to be reported, one patient had a suprapubic prostatectomy performed for relief of prostatic hypertrophy, and the other an anterior urethral stricture.

REPORT OF CASES

CASE 1.—F. V., a Portuguese laborer, age sixty-eight years, entered Fairmont Hospital on February 5, 1924, with a complaint of inability to urinate. Past history was essentially negative and the family history irrelevant. He dates his present illness to about two years before entry; at that time he began to notice slowing of the urinary stream, hesitancy and nocturia, gradually progressing to acute urinary retention. He was catheterized by a private physician a few times and then entered the hospital.

Physical Examination.—The patient was a well-preserved male, not appearing ill. Head, neck, and lungs were normal. There was a presystolic murmur over the apex and a slight thrill felt over this area. There were no abdominal organs palpable, no masses,

* From the Urological Service, Highland Hospital, Alameda County, California.

tenderness or rigidity felt. Extremities were negative, and the reflexes physiologic. Rectal examination revealed a moderately enlarged, well circumscribed, simple hypertrophied prostate. A No. 18 soft-rubber catheter was passed with difficulty and 150 cubic centimeters of hazy urine withdrawn. The catheter was left in place for drainage and irrigation in preparation for prostatectomy.

Cystoscopic Examination.—On February 9 a cystoscopic examination was done which showed a lateral lobe hypertrophy of the prostate; bladder walls were markedly trabeculated; no ulcers, tumors, stones, or diverticuli were seen. Ureters were not catheterized.

Laboratory Findings.—Hemoglobin, 90 per cent; white blood cells, 12,900; with 74 per cent polymorphonuclear cells, 14 per cent small lymphocytes, 6 per cent large lymphocytes, and 6 per cent eosinophils. The blood Wassermann was negative. Chemical analysis of the blood showed blood urea 19.8 milligrams per cent. Phenolsulphophthalein test was 40 per cent the first hour, 20 per cent the second hour, totaling 60 per cent for the two hours. Urinalysis showed: reaction alkaline; albumen, + + +; sugar-negative; red blood cells +; and pus cells + + +.

Operation.—A one-stage suprapubic prostatectomy was performed on February 14, 1924, under caudal and regional anesthesia. There was little bleeding, the patient leaving the table in good condition.

Postoperative Progress.—The patient's temperature rose the following day and stayed elevated, although fluctuating, until February 26. At this time a periurethral abscess was opened and drained. His general condition was good, he was taking fluids well, and relishing his food. His temperature remained practically normal for one week, when it again rose to 101 degrees Fahrenheit. The usual supportive treatment of intravenous glucose, saline, etc., was administered. A note on March 11, read: "Chest negative, no tenderness over kidneys, wound granulating slowly, rectal examination negative, peri-urethral fistula not draining." On March 16 the patient had a severe chill and a phlebitis of the left leg was noted. Blood was taken for culture and reported positive for *Bacillus proteus*. Twenty cubic centimeters of one per cent mercurochrome was administered intravenously daily for five days. Although the fluid intake and the urinary output were good, the patient became increasingly more toxic, the pulse rising to 120 to 130. The patient expired of myocardial insufficiency on March 26, 1924. No autopsy was performed.

CASE 2.—W. J., a male negro, age seventy-five, entered on the urologic service of Highland Hospital on February 25, 1932, with a complaint of difficult and painful urination. As the patient was senile no reliance could be placed on his answers to questions pertaining to his past history. His present illness dates back to about five months before entry, when he began to experience increasing difficulty on urination with frequency and nocturia three to four. About one month following apparent onset, he noticed marked burning on urination with occasional chills, but he was not aware of any fever associated with the chills.

Physical Examination.—The patient was poorly nourished, complaining of pain over the bladder. There were many coarse râles at the bases of both lungs

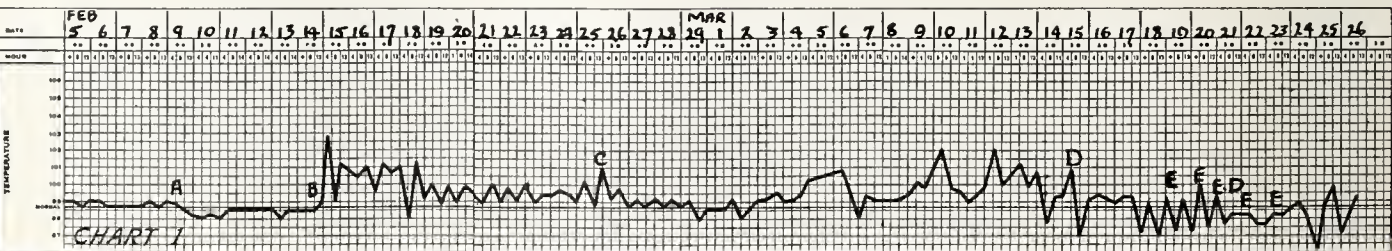


Chart 1.—A, cystoscopy; B, operation; C, periurethral abscess drained; D, positive blood culture; E, intravenous mercurochrome.

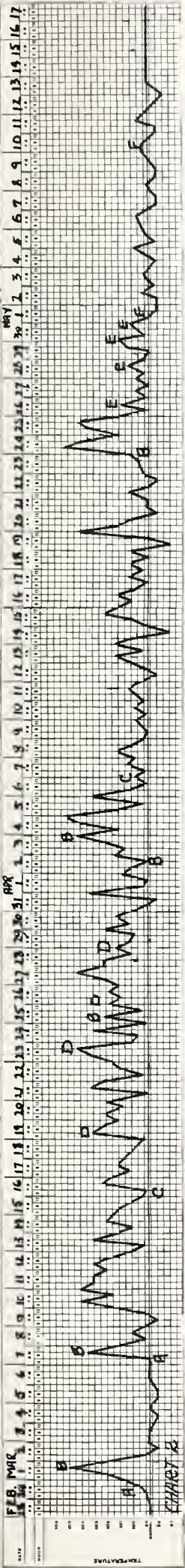


Chart 2.—A, stricture dilated; B, chill; C, blood culture positive; D, intravenous mercuriochrome; E, intravenous sodium ricinoleate; F, negative blood culture.

posteriorly. Heart was negative. On abdominal palpation there was no rigidity. Liver and spleen were not palpable. The bladder rose to about three fingerbreadths above the symphysis pubis. Rectal examination revealed a tight sphincter; prostate was normal in size, well outlined and tender, prostatic massage yielded about 40 per cent pus. Extremities negative and reflexes sluggish but present. On an attempt to pass a catheter a stricture was met distal to the bulbous urethra. A filiform was passed to the bladder, and the stricture was dilated to number 24 F. Moderate bleeding followed. A No. 16 soft-rubber catheter was inserted for continuous drainage and irrigation, as the urine was turbid and of a strong odor.

Laboratory Findings.—Hemoglobin 95 per cent; white blood cells, 13,700; polymorphonuclears, 67 per cent; small lymphocytes, 31 per cent; large lymphocytes, 2 per cent. Blood chemistry: Blood urea, 14 milligram per cent. Urinalysis: Specific gravity, 1013; reaction alkaline; albumen, +++; sugar-negative; pus cells +++; bacteria, +++. No culture made. Wassermann was negative.

Course in Hospital.—Four hours following the dilatation of the stricture, the patient had a chill and the temperature rose to 104 degrees Fahrenheit, subsiding the following day to normal. Six days later the stricture was again dilated, the resultant chill lasting twenty minutes, the temperature rising to 103.4 degrees Fahrenheit and remaining elevated for the following fifty-five days, ranging from 99 to 104 degrees Fahrenheit. The usual supportive treatment of intravenous glucose and subcutaneous saline was instituted. Blood for culture taken on March 16 was positive for *Bacillus proteus*. Fifteen cubic centimeters of one per cent mercuriochrome was administered intravenously on March 19, 23, 26, and 29, without an appreciable alteration in the septic swing of the temperature. On April 7 the blood culture was still positive for *Bacillus proteus*, and the hemoglobin, which on entry was 95 per cent, dropped to 52 per cent. The patient at this time appeared very

toxic, weak and failing. By April 21 the hemoglobin was 29 per cent, but the patient was still cooperating in taking fluids and nourishment. On April 26, 200 cubic centimeters of 0.1 per cent sodium ricinoleate was administered intravenously, and within twelve hours the patient remarked that he felt better. For four consecutive days the same amount of 200 cubic centimeters of 0.1 per cent sodium ricinoleate was again administered and from then on the patient exhibited a remarkable recovery.

A blood culture taken April 30, four days after the first intravenous injection of the sodium ricinoleate, was negative and the temperature remained practically normal except for slight rises, which could be attribute to the infected bladder. The patient's hemoglobin rose to 40 per cent on May 11, and to 50 per cent on May 23. The patient has been ambulatory since May 10. He was discharged, to continue the treatment for dilation of the urethral stricture.

SUMMARY

1. Two cases of *Bacillus proteus* septicemia are reported, one ending fatally.
2. The rarity of this type of septicemia is stressed; chronic debilitating infections and decreased resistance are evident predisposing causes.
3. One case has apparently recovered following the intravenous use of sodium ricinoleate.

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DRESSINGS OF INGUINAL OPERATIVE WOUNDS IN INFANTS

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DRESSING of the operative wound following the repair of an inguinal hernia in an infant is always a problem. It is practically impossible to maintain a gauze dressing in place without it becoming contaminated.

The following dressing is, I believe, superior to most dressings. The edges of the skin wound are approximated by small Michel clips which are first dipped in compound tincture of benzoin. The clips are placed with just enough pressure to approximate the skin edges. The wound and clips are now coated with a thick, gummy layer of compound tincture of benzoin. This gummy consistency is obtained by allowing the compound tincture to evaporate in an open container until a molasses consistency is reached.

The nurses are instructed to paint over this layer of compound tincture of benzoin with the ordinary compound tincture of benzoin daily. On the fifth or sixth day the dressing is loosened with alcohol, and the clips are removed. It is usual to find a well-healed, firm scar, without any evidence of infection.

490 Post Street.

BEDSIDE MEDICINE FOR BEDSIDE DOCTORS

An Open Forum for brief discussions of the workaday problems of the bedside doctor. Suggestions of subjects for discussions invited.

APPENDICITIS

GEORGE K. RHODES, M.D. (490 Post Street, San Francisco).—In discussing the subject of factors influencing diagnosis and prognosis in acute appendicitis, we must ask ourselves some very pertinent questions:

1. Why is the mortality from appendicitis operations higher in the United States than in any other country in the world?¹ There must be some explanation for these mortality rates per 100,000: Italy, 3.7; England, 7.1; Germany, 9.0; United States, 15.2.

Davis,² in a survey of United States vital reports, tells us of a gradual increase from 9.7 deaths per 100,000 population in 1900 to 15 in 1927, an increase of 34.7 per cent.

Is the morbidity greater, or do we have more violent pathology? Is poorer surgery done?

2. Is the treatment of appendicitis properly standardized, as are other procedures designed to combat specific disease? Have we not all seen unfortunate fatalities from appendicitis which possibly were attributable to certain errors of judgment either before, during, or after operation?

Such illuminating statistical studies of appendicitis as those conducted by the Philadelphia Department of Health should stimulate other systematic investigations. Statistical studies, to be of any value, must be based upon comparable conditions of disease. In such a series of cases, would the results of the well-trained surgeon be essentially those of the surgeon whose experience is more limited? Is our high mortality the result of surgical technique or serious pathology?

The ultimate prognosis of the disease, acute appendicitis, must depend upon early diagnosis, adequate surgery, and intelligent postoperative care.

Diagnosis.—To become "appendicitis minded" we must look upon every acute abdominal complaint as appendicitis until such a diagnosis is definitely eliminated by careful systematic investigation. The underlying pathology of acute appendicitis is that of an acute inflammation of the appendix, which is secondary to septic emboli or an exacerbation due to more chronic lesions as a kink or stricture with or without fecalith, etc. Here we find the usual gradual sequence of a pathologic state resulting from an obstructed blind viscus with its circulation damaged. Accordingly we should not expect the complete clinical picture to develop instantaneously, as seen in the instance of acute perforated peptic ulcer.

There usually is a lapse of six to eight hours before sufficient inflammation has developed to show general and local signs of inflammation, *i. e.*, fever, local tenderness, muscle spasm, rebound tenderness, leukocytosis, etc. It is during this early six to eight-hour period that both the patient and his doctor are most often deceived as to the serious nature of the incipient disease. Often the only evidences of appendicitis at this period are those subjective symptoms of abdominal pain, usually referred to the epigastrium, followed by nausea and vomiting.

If, however, our patient is seen after eight hours, the correct diagnosis is usually very evident. By this time the general or epigastric distress has shifted to a "soreness" in the right lower quadrant, and there are exacerbations of colic pains in this region. The temperature and leukocytes are now usually elevated. The classical signs of early peritonitis begin to supervene.

In the differential diagnosis the following disorders must be definitely considered: gynecologic, renal, biliary, gastro-intestinal, etc.

Physical Examination.—The usual physical findings upon abdominal examination also vary markedly with the degree of peritonitis present and the amount of parietal peritoneum involved in the process. The patient with an extensive or rapidly spreading peritonitis may show physical findings approximating in degree those found in an acute perforated peptic ulcer (*i. e.*, scaphoid and rigid abdomen, cessation of abdominal respiratory movements, "quiet" abdomen to auscultation, rebound tenderness, etc.). On the other hand, we may have an appendix developing as much pathologic changes and latent possibilities, which may give absolutely no abnormal physical signs, such as tenderness, muscle spasm, etc. At operation this type of appendix is usually found to be retrocecal or in the true pelvis or cul-de-sac. The latter type can be felt rectally, the former usually shows tenderness in the right flank.

Temperature.—We should never wait for an elevation of the temperature as a determinant factor for or against operation. Too often the temperature may remain normal in association with severe disease of the appendix. Rectal temperatures should be taken routinely.

Laboratory Findings.—While it is true that there usually is a moderate leukocytosis and a relative increase in polymorphonuclear elements, we must *not* rely too strongly on such laboratory data as an indicator for or against surgery. We like to see the blood count dovetail into the classical clinical history and physical findings, but it never should supersede these all-important items as a diagnostic agent. There are many factors

¹ Hoffman, F. L.: Appendicitis Record for 1930, The Spectator (Aug. 27), 1931.

² Davis, B. B.: Why Is Mortality of Appendicitis Increasing? Neb. State Med. J. (Feb.), 1931.

which may influence and cause a variation in blood counts. (The blood count showing a leukopenia may help the decision of diagnosis in favor of such less acute clinical manifestations as intestinal influenza, tuberculosis, typhoid, etc.).

The Time to Operate.—The general rule to operate just as soon as the diagnosis is made would meet with the approval of most surgeons in most instances. No one of experience can honestly estimate accurately the extent of the disease present in the appendix before operation. So much depends upon the initiating factors, such as kinks, fecaliths, etc., which differ in each instance. We have all seen a patient develop an acute gangrenous, perforated appendix within six hours after the onset of clinical symptoms, while the very next patient might have required seventy-two hours to develop the same degree of pathologic change. Such observed facts should show the fallacy of placing any time element as a determinant factor for urging an individual operation.

General Contraindications for Immediate Surgery.—Every experienced surgeon reaches his conclusions not to operate immediately upon a particular group of patients because his surgical judgment tells him that patients falling into this class do poorly with radical surgery. Furthermore, he knows that many members of this group respond well to conservative treatment and delayed surgery. Into this group my own experience tends to place the patients with the following symptoms and signs:

1. Poor general physical condition, either from other coincidental disease, such as cardiac and lung lesions, or those debilitated from long sepsis or toxic state.

2. A peritonitis that from physical signs and general body reaction seems unusually acute and fulminating. The pulse is rapid and the volume is impaired. Often there is other evidence of threatened circulatory failure. This condition is seen frequently in children.

This group of patients undoubtedly will do much better if operation is deferred until a conservative type of therapy can build up the general and local resistance of the patient. The so-called Ochsner type of conservative therapy has its ideal application in the patients of this group. In many of these patients so treated, nature will ultimately reduce the surgery indicated into simple incision and drainage of a localized abscess. Usually the abscess points into the cul-de-sac and should be opened rectally when possible.

Anesthetic.—Undoubtedly an ill-chosen or poorly administered anesthetic may be a factor of considerable importance in our ultimate results. The surgeon will use that anesthetic which in his hands gives the best results. My own choice in all acute abdominal surgery is a spinal anesthetic, unless special contraindications to its use are present. The complete relaxation obtained certainly facilitates the exposure with the minimum of trauma, traction, and contamination.

Operative Procedure—Incision.—There are two general incisions, each with its good points and faults.

McBurney Type Incision.—When one is accustomed to this incision it would seem the most logical procedure in most instances.

Arguments in favor of muscle-splitting, McBurney Type, incision in acute appendicitis:

1. Direct approach to the area with the minimum trauma and contamination of the general peritoneal cavity.

2. Abdominal drainage through a McBurney incision affords the shortest route to the skin.

3. Statistics show that there are far fewer post-operative ventral herniae following drained suppurative muscle-splitting wounds than in other types of infected laparotomy incisions.

4. Secondary operations during convalescence (as for intestinal obstruction, etc.), are facilitated by the suppurating wound being in the right lower quadrant and away from the newly contemplated laparotomy wound.

5. Patient becomes ambulatory much sooner.

6. A general exploratory laparotomy incision is seldom needed for such limited and localized pathology.

Arguments against the McBurney type, muscle-splitting incision:

Chiefly those associated with inadequate exposure.

Right Rectus Type of Incision.—Arguments in its favor:

1. Free and adequate exposure.

Arguments against:

1. Danger of disturbing a localized abscess in the right lower quadrant so that the entire abdominal cavity is thus contaminated.

2. Possible sequelae from establishing suppurative abdominal drainage through a rectus incision (partial evisceration, etc.).

Possibility of further spreading a local peritonitis to one more general.

Possibility of producing extensive intestinal adhesions about the drains which traverse the abdominal cavity.

Treatment of the Diseased Appendix.—If the appendix be not ruptured, it should be removed cautiously and the stump treated as in the more chronic type. Careful toilet of the peritoneum and peritonealization of all raw surfaces of the meso-appendix and of the stump would seem the safest assurance against future trouble. Great care must be taken to prevent the needle entering the lumen of the bowel with resultant contamination. Those who advocate not covering the appendiceal stump in these cases must not entirely discount the testimony of many observers who report instances of intestinal obstruction developing later.

If the appendix is ruptured and is easily removed, such should be the procedure.

If the appendix is not easily identified or is so intimately involved in a chronic abscess wall, it is often advisable to drain the abscess only, and remove the appendix at some more favorable time.

If the appendiceal abscess is definitely localized in the pelvis, it is undoubtedly safer to drain it

through the rectum than to make an abdominal approach and further contaminate the general abdominal cavity.

Drainage.—Extensive clinical and laboratory studies on acute peritonitis are proving to us that the dictum "when in doubt, don't drain" will save more souls than that older thought so religiously practiced, "when in doubt, drain." Laboratory work proves conclusively that drains do not really drain the abdominal cavity but act as foreign bodies which are completely walled off in a few hours by becoming encased in a tube of fibrin surrounded by abdominal viscera. Such foreign bodies also aggravate peritonitis in experimental studies.

Type of Drains.—The hard rubber tube with its frequent sequelae of pressure sloughs, fistulae, and hemorrhage, etc., has been almost entirely discarded in favor of soft rubber tissue drains of the cigarette type. These should be shortened gradually each day to allow the abscess cavity to collapse as the drainage tract is developed.

Preoperative and Postoperative Treatment.—If the patient falls into that group previously described as poor operative risks, he should be treated conservatively, after the manner popularized by Ochsner.

If the patient is considered a satisfactory risk, no special preliminary preparation is necessary other than routine sedatives and fluids by clysis or intravenous routes. The use of large enemas, either preoperatively or postoperatively, are mentioned only to be condemned.

Treatment of Peritonitis.—If operation discloses the evidence of early peritonitis, then every measure to combat and anticipate a fatal paralytic ileum, etc., should be instituted at once. These measures should include:

1. Massive hot abdominal stupes.
2. Intravenous administration of glucose solution, 10 per cent (2,000 cubic centimeters daily).
3. Hypodermoclysis, 2,000 to 3,000 cubic centimeters normal saline solution daily.
4. Continuous gastric lavage with nasal tube.
5. Low colonic flushes, fluid volume not to exceed 500 cubic centimeters.
6. Limited fluid intake by mouth.

If clinical evidence of paralytic ileus still progresses in spite of these therapeutic measures, pituitrin in one-half to one cubic centimeter doses may be given every four hours, followed by low colonic flushes, 500 cubic centimeters. A carefully placed enterostomy tube into the jejunum through a small left rectus incision often will avoid an otherwise inevitably fatal issue. The enterostomy catheter is more safely introduced if the loop of jejunum be first isolated between intestinal clamps, and collapsed.

Postoperative Mechanical Obstruction.—Postoperative mechanical obstruction occasionally develops when loops of terminal ileum become matted to the wall of the abscess cavity or intra-abdominal drains. Inasmuch as this type of ob-

struction is often only in part mechanical and part paralytic, a jejunostomy tube will correct the pathologic picture.

Conclusions.—If we are to stem the lamentable tide of ever-increasing mortality statistics we must begin to take this disease out of the discard and become "appendicitis minded" again. The issue probably is not so much one of error in diagnosis as one of careless and improper treatment of a very common disorder.

* * *

E. ERIC LARSON, M. D. (1930 Wilshire Boulevard, Los Angeles).—Appendicitis is one of our most common diseases. In nearly all instances it is readily detected by the physician. The layman is also becoming quite proficient in sensing this condition when there is abdominal distress. The treatment is fairly well defined and is universally the same. Some notes regarding its treatment are here submitted.

Statistics, as shown by a recent bulletin of the American College of Surgeons, reveal that twenty thousand persons die annually in the United States from appendicitis and its complications. The death rate in the United States is 124 per cent greater than in Europe. Each patient having appendicitis has one chance in thirty-eight of not recovering. The mortality has increased 31.5 per cent in the last twenty years in sixty of our largest cities. In proportion to the population of Los Angeles, according to the Department of Vital Statistics, the number of deaths from appendicitis over a ten-year period is as follows:

Year	Deaths	Population
1922	88	736,963
1927	131	1,079,789
1932	177	1,283,859

Obviously there must be a reason for this progressive mortality. Except for the change in virility of bacteria, the pathology and bacteriology of the condition remain unchanged. The essential principles involved in dealing with the disease, both medically and surgically, have been practically the same during the past two decades. Our physicians and surgeons have opportunity to be much better trained in diagnosis and more skillful in surgical principles and technique. Why, then, are we compelled to admit this increasing mortality? The explanation may be, first, the lack of publicity and the apathy of the layman to this serious condition; second, cultist influence; third, injudicious practices by many of the medical profession and their failure to apply well-grounded knowledge.

There should be a frank discussion with the public regarding the mortality of appendicitis, when treated and when untreated. This should include the record of the individual surgeon and the institutional mortality in appendicitis. Recently a nonmedical columnist has suggested that all surgeons, as well as all hospitals, should publish mortality statistics in the same manner as banks issue their financial statements. News writers and editors should, in reporting deaths from appendicitis, not state that the patient died

from an operation for appendicitis, which gives the layman a false impression. Rather, the facts should be stated, that the patient died of appendicitis which an operation failed to cure because of delay resulting in peritonitis or whatever complication might have existed in the particular instance. Thus the public can be properly informed as to the true nature of the disease. The press might inform its readers that an abdominal distress suffered for a period of several hours should have definite management, that is, the forbidding of laxatives, restriction of intake by mouth, application of cold to the abdomen, and a call by the family physician for diagnosis. The family should be informed to insist that the doctor make necessary tests and ask for consultation, if necessary, to make the diagnosis as certain as possible.

The public should be told of the necessity of early diagnosis, with prompt and scientific management. The interval or healed appendix, the appendix removed secondarily during other abdominal operations, and the so-called chronically infected appendix, including tuberculous or mucocele type of pathology, are well handled by almost any operator, with a minimum mortality.

A case of acute appendicitis, however, is an altogether different problem, and is, of course, never stationary. It is progressing, either favorably or unfavorably, depending on whether the bacteria or the antibodies are ascendant. The condition may be mild and simple, or complicated and dangerous. A careful check of the history will reveal the duration of the attack, whether there have been repeated attacks, or whether there are present other signs pointing to early and serious complications. Immediate removal, if permissible, incurs little danger. The operation should not be delayed for the convenience of the surgeon when so much is at stake for the patient. If, however, the process has been allowed to be neglected, or if the patient is seen at a late stage when there are signs of generalized spread of infection, either into the abdominal cavity or the vascular radicals, the mortality risk is increased. An inexperienced, unqualified operator may cure many of the mild cases and thus build up a good reputation, whereas in the serious and neglected type even the master surgeon may fail to save his patient. In the latter instance we may fitly apply the oft-repeated dictum of John B. Deaver: "It may be too late for an early operation and too early for a late operation." The correct application of this dictum comes only when the surgeon is well trained, has had much experience and can apply good surgical judgment. It is through correct handling of these patients that we can lower the mortality in appendicitis.

Besides early diagnosis and expert surgical technique, the preoperative care of the advanced and neglected cases should have much consideration. The surgeon should visualize the existing intra-abdominal pathology, ever mindful of that "treacherous calm" often seen immediately following the rupture of the distended appendix or abscess.

He must determine to the best of his ability the general condition of the patient incident to the amount of intestinal stasis, the degree of dehydration caused by vomiting, and other physiologic factors. Clinical interpretation of accompanying disease elsewhere in the body, such as obesity, cardiovascular or kidney disease, is important. The surgeon may, in some instances, show better judgment in allowing an abscess to form, to be drained at a later date, than in subjecting his patient to immediate operation. These problems demand wisdom and experience.

Anesthesia is becoming much less of a problem. Ether is, and has always been, our safest inhalation anesthetic when properly administered. Nitrous oxid and oxygen or ethylene may, in the hands of expert anesthetists, be used with safety, but the loss of relaxation in a difficult operation may make the procedure hazardous. Spinal anesthesia properly employed gives perfect relaxation, enables the surgeon to perform his operation quickly, and minimizes the complications incident to surgery. There is usually very little shock to the patient, and the immediate postoperative recovery is less distressing. It appears that spinal anesthesia is being increasingly used.

Countless articles have been written, dealing with the various types of incisions, methods of caring for the stump, and drainage. Each method has its supporters and dissenters. The solution, however, will not be obtained until every surgeon and institution is able to classify all patients as to pathology, their general condition, bacteriology of the disease, and individual resistance to infection. In doing this we will use many thousands of classified instances in making statistics, thereby obtaining definite and valuable information and rewriting the story of appendicitis.

All qualified surgeons know that the incision must be placed directly over an abscess in order not to soil the abdominal cavity. For this reason the incision may, if necessary, be placed in almost any aspect of the lower abdomen. Whether or not the appendix is removed when the abscess is drained must also be left to the judgment of the surgeon. It is simple to remove the appendix at a later operation, with little attendant danger. The drainage problem must also be cautiously considered at the time of operation. The drains, if used, should be so placed that the coils of intestines do not encroach upon the drainage channel and later lead to adhesions and obstructions. The position of the patient may facilitate drainage. Since soft rubber drainage material has been universally used, we rarely see a fecal fistula.

The care of the stump may vary in the hands of each surgeon. Simply ligating the stump is apparently as justifiable a method of treatment as inversion or burying, if a good ligature is applied and careful toilet is maintained, and if the defect is placed in a position where a coil of intestine cannot become adherent.

Postoperatively the patient requires watchful care and expert management. He may need an

abundance of fluids, transfusions, serums, or more adequate drainage. There must be intelligent evaluation of the earliest signs of distant complications, such as pneumonia, liver or subphrenic abscess, kidney or cardiac damage. The too often forgotten enterostomy may become necessary for the relief of a severe and otherwise fatal ileus.

Postoperative ventral hernia following drainage often causes concern and may result in numerous inadequate operations for its cure. The use of autogenous fascia lata transplants has been effectively employed by many surgeons. These strips, taken from the thigh and placed in basket-weave formation, incorporate themselves into the existing fascia and give a solid and adequate abdominal wall.

A word should probably be said regarding the use of serums in postoperative management in very severe instances of generalized peritonitis. It is generally known that few humans harbor anaërobic bacteria. At the time that free pus is encountered in the abdominal cavity, cultures should be made for anaërobic as well as aërobic types of bacteria. Intravenous and subcutaneous injections of trivalent anaërobic serum have been used with startling results in many instances. Intra-abdominal vaccines, as well as the proper use of bacteriophage, will no doubt in time be available as a means of assisting in the treatment of the present fatal type of peritonitis.

Summary.—1. There is an appalling increase in the death rate from appendicitis, and the story must be rewritten.

2. The public must become educated to the seriousness of this common disease. Early diagnosis with prompt and efficient management will lower our mortality.

3. Besides the employment of careful surgical technique, the surgeon must evaluate the patient's condition, visualize the existing pathology, and use judgment as to where the incision is to be placed and how extensive an operation is to be done. The type of anesthetic plays an important part in the welfare of the patient.

4. The preoperative and postoperative care of the delayed or neglected patient requires study and diligence in maintaining the patient in as good a condition as is possible.

5. The use of serums, vaccines, and bacteriophage must not be underestimated.

* * *

WILLARD T. CONLEY, M. D. (6331 Hollywood Boulevard, Los Angeles).—The profession for some time has been turning from some of its former views on the subject of appendicitis. The influences have come from the extensive work done in other fields in abdominal disease, and from other factors.

The realization is growing that appendicitis is not always a local entity, but is often the seat of the first reaction to a systemic invasion by bacteria. The general character of the disease which

is occasionally manifested by appendicitis often accounts for the continuance of the complaints after appendectomy. In a reverse order, symptoms may take on a systemic nature from an inflammatory process chiefly active in the appendix. This latter condition leads to a symptomatology that may not include all of the signs which make up what is still held to be the classical syndrome.

The observations made of new and old infections of the appendices in the new-born strengthen a suspicion of the general character of the disease, and result in the belief that histories of former attacks can be erroneously negative in patients who have recovered from their primary injury before birth. These often obscure the diagnosis until the patient drifts into serious or even fatal complications.

The lowering of the present high death rate rests, in a measure, on a careful consideration of the presence of appendicitis in all patients in whom gastric and nutritional disturbances are among the principal complaints.

The recognition of the general, as well as focal, symptoms of appendicitis will come through the application of the accepted principle of varied reactions to infections of the gall-bladder, stomach, and teeth. The local and general reactions aside, the symptoms are further modified by the position of the appendix, whether high or low in the abdomen, its relation to the peritoneum and mesentery, and the age of the patient.

For convenience, inflammations of the appendix can be divided into acute and chronic. In the acute forms the symptoms are more often local than general, such as: sudden general abdominal pain, later localizing over the lower right quadrant and accompanied by tenderness, rigidity and constipation; while the general signs are usually no more than nausea, vomiting, slight elevation of temperature and pulse rate, and leukocytosis. In the chronic forms the patient complains less of abdominal discomfort and more of what we deem the symptoms of general toxemia, malaise, unremitting muscle aching of arms and legs, occasional flashes of nausea, and gastric upsets. These are even more characteristic in their unresponsiveness to tonics, and are actually intensified by exercise. As the time approaches when the inflammatory process will pass beyond the tissues of the appendix, these general symptoms increase, especially those of digestion. The nausea becomes more pronounced, indigestion increases until nearly all foods are prohibited, fatigue and aching become almost unendurable. Constipation, of which the suffering individual has complained from the beginning, now requires, on his part, drastic purgatives—a resort that usually terminates the general complaints in one of an abdominal crisis, due to rupture of the appendix.

The appendix has been found in nearly all locations of the abdomen, but those considered most usual are: appendix hanging over the brim of the pelvis; appendix upward and medially pointing toward the spleen; and appendix upward behind the cecum.

Keith states that the paccian corpuscles, which are abundant in the mesentery and peritoneum, when irritated cause a reflex immobility of the abdominal wall. Tyrrell-Gray observed that such irritation excites sympathetic inhibitory impulses, producing ileus and vomiting. The mechanism set into action by irritation of the nerves of the mesentery hyperactivates includes:

(a) The efferent sympathetic, resulting in inhibition of the terminal ileum and cecum.

(b) The afferent sympathetic, the efferent response evoking: (1) Proportionate immobility of the whole intestinal tract, and (2) proportionate closure of the pylorus against the passage of food.

(c) The afferent vagus, the resultant contraction of the proximal stomach against a closed pylorus emptying that viscus of food.

Deaver states that local pain increases with the proximity of the appendix to the parietal peritoneum, and that pain may be referred to the right lumbar region, right thigh or right testicle through impulses reaching the superior mesenteric plexus through a branch supplying the appendix, and transmitted to the part of the spinal cord which gives off the lower dorsal and lumbar nerves.

When the appendix is in the retrocecal position, pain may be complained of in the right loin, liver, or right kidney regions. Tenderness is often both superficial and deep, though it may be diminished when the appendix is in the pelvis. Nausea is more constant as a symptom than vomiting. Some observers say that both may be absent. However, the common experience is that nausea in some degree is usually present during acute attacks.

In the chronic forms of appendicitis the inflammatory reaction may not include any of the surrounding area, and consequently local tenderness, rigidity, and even constipation, may not be found. Pain may be absent where there still remains free drainage for appendiceal contents, but disturbed digestion is present, as it arises from irritation of the rich nerve supply in the wall of the appendix. McDonell recently reported a rigidity of the upper right rectus, when accompanied by persistent fatigue and indigestion, as a sign of chronic appendicitis. Buchman observed in thirty-five hundred cases dilatation of the right pupil in 88 per cent, and of the left pupil in 6 per cent.

The reaction of tissues is altered by age. Old people may have none of the classical signs during an acute attack. Lewin reported twelve cases with left-sided pain, due to distention and upward displacement of the iliac coils, with incessant vomiting and total absence of signs in the lower right quadrant. In children the long mesentery permits the cecum to fall low in the pelvis. Pain on urination and defecation should be regarded seriously. Trotter says that colicky pains and delicate abdomen in children often result from appendicitis.

A differential leukocyte with Schillings' classification should be done routinely with every blood examination.

A Bill Providing for a Council on Medical Ethics.—For many years the physicians of France have been demanding the creation of an official council on medical ethics, patterned after that which exists for the lawyers and possessing the same privilege of judging alleged violations of professional honor, independently of the delicts that come under the jurisdiction of the ordinary courts. The Confédération des syndicats médicaux had assumed in part this rôle, but its decisions had no legal weight. But physicians are not all favorable to the idea; there are many who fear that such a tribunal may not always be impartial and that sometimes it may render decisions inspired by professional jealousy. The Academy of Medicine, when consulted on the subject a few years ago, gave an unfavorable opinion and proposed in preference a return to the ancient oath of Hippocrates, in connection with the conferring of the doctor's degree, and the creation of a course of instruction in professional deontology at the faculties of medicine. The question slumbered on until suddenly, December 8, 1932, at a morning session of the chamber of deputies, a bill providing for the creation of a council on medical ethics, presented by Deputy Xavier Vallat, was voted on and passed without examination or discussion, along with numerous other bills of secondary importance, being simply read to the assembly and voted on at once by show of hands, while the attention of parliament was centered on the discussion of the grave question of the debts owed to the United States. This decision, which is so important for the medical profession, resulted, therefore, from a surprise vote. However, the bill will not become a law until it has been approved by the senate, which, no doubt, will examine it more closely. Its essential stipulations, which as yet are not definitive, provide for the compulsory enrollment of every practicing physician in a chapter to be created in each department. Each chapter would elect a council composed of from six to twenty-four members, depending on the number of voters, and this council would select a president and a committee on discipline. Every professional misdemeanor would be judged by this council and the following penalties are provided for: (1) warning, (2) reprimand, (3) suspension of practice for a period not to exceed one year, and (4) removal of the offender's name from the roster of the council and definitive revocation of his license to practice medicine. There is established also a tribunal of appeal, which consists of two magistrates, one of whom is the president of the council. The decisions of the council are transmitted officially to the prefect of the department in question, whose duty it is to enforce the penalty of suspension or of removal from the register of physicians.—*Paris News Letter. (Journal of the American Medical Association.)*

Complications of Common Cold.—Yates believes that the common cold is devoid of complications except in the following circumstances: (1) When the discharges are confined within a sinus or within the middle ear by reason of the swelling of the mucous membrane, which interferes with drainage. (2) When there is a secondary infection from contact with a person whose nose contains micro-organisms that are resistant to the natural destructive powers of the nasal mucus and thus live and multiply within it. (3) When the mucus in the nose is diluted either by nasal douching or by bathing. (4) When the common cold affects a person who is in ill health. The complications of the common cold are found: (1) Within the nasal sinuses; diagnosed by the presence of pain and relieved in the early stages by cocaineization of the nose and thus effecting drainage, and in the later stages by washing out the sinuses with liquid petrolatum. (2) Within the ear; acute otitis media is treated by efficient myringotomy (the sooner myringotomy is performed, the quicker the recovery). (3) Within the larynx and bronchi; laryngeal and bronchial complications are treated by sprays of liquid petrolatum, which aid the cilia in conveying the excess of mucus through the trachea and the larynx.—*Practitioner (London).*

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EDITORIALS*

STATUS OF PROPOSED PUBLIC HEALTH LEGISLATION

The Fate of Certain Bills.—The California Legislature recessed on May 16 and will reconvene on July 17, 1933. The information given below concerning a number of the more important public health bills may be of interest. More detailed information is given in the report of the Committee on Public Policy and Legislation, which is printed in this number, page 474.

Assembly Bill 1277. Introduced by Assemblyman Roy Nielsen of Sacramento:

"An act defining clinics and dispensaries and providing for the operation, conduct, maintenance, and the examination and regulation thereof, and the issuance of permits therefor by the State Board of Public Health and the Director of Public Health."

After a very bitter battle the clinic bill was passed, reconsidered, and again passed at 1:30 a. m. on May 16. The measure is now before Governor James Rolph, Jr. His signature would make it a law.

* Editorials on subjects of scientific and clinical interest, contributed by members of the California Medical Association, are printed in the Editorial Comments column, which follows.

Senate Bill 674. Introduced by Senator Roy Fellom of San Francisco:

"An act to regulate the conduct of pounds, prescribing the duties of persons in charge thereof or employed thereat, and regulating the disposition of animals impounded or sheltered therein."

The fight over this, the so-called antivivisection bill, was very strenuous. Amendments fortunately were added to the measure which emasculated its more vicious features. It was then re-referred to committee. Its passage at this fiftieth session of the legislature is now impossible. Two years hence, however, probably in some new form, it will no doubt again show itself. This fact should be kept in mind. A campaign of education in the years 1933 and 1934 would not be amiss. And two years from now, prior to the primary and final elections, the "vivisection" leanings of legislative candidates may well be scrutinized and appropriate action decided upon.

Assembly Bill 539. Introduced by Assemblyman Charles W. Lyon of Los Angeles:

"An act to amend sections 2167, 2167a, 2169, 2172 and 2175 of, to repeal sections 2168, 2170, 2171 and 2185c of, and to add new sections numbered 2168, 2171, and 2185c to the Political Code, relating to persons mentally disordered or otherwise incompetent."

This bill, which was designed to provide more humanitarian care for the mentally sick, also was bitterly fought, especially by the organization of sheriffs of California. Through alert and loyal management it went on to passage and is now before the Governor for signature, where it is still being fought by the sheriffs. Its enactment into law would mean a long step forward for California in the handling of its mentally sick citizens.

After the above was written, press dispatches stated that because of the controversy over the measure, Governor Rolph had vetoed the bill, "but without prejudice" and with recommendation that it be reconsidered after the July recess.

Concerning other of the more important bills having a relationship to the public health, the following notations may be made:

Assembly Bill 1778. "An act to provide for the aid and relief of indigents" went on to passage and is before the Governor for signature. It is seemingly not much better or worse than the law it seeks to replace.

The "corporate medicine" measures (S. B. 160, S. B. 953, and A. B. 695) were all "lost in committee."

The "naturopathic bills" (A. B. 1159 and A. B. 1306) had a like fate.

The "pay patients in county hospitals" bills (A. B. 2190 and S. B. 782) also failed to get out of committee.

The "chiropractors to do compensation work" bill (A. B. 900) came out of committee but on the assembly floor was tabled, and by that route went down to defeat.

The "chiroprodists'" bill (A. B. 313) was satisfactorily amended and went on to passage.

* * *

Thanks of the Association to All Who Rendered Service.—Too much praise cannot be given to the chairman of the California Medical Association Committee on Public Policy and Legislation, Dr. Junius B. Harris of Sacramento, and his aides, who jointly bore the brunt of the hard legislative conflicts which have taken place almost daily since January 2, 1933, when the present fiftieth legislature of California held its first meeting. To the officers and to a host of other workers in the component county societies go the thanks of the Association for the efficient services which they likewise rendered.

Readers of CALIFORNIA AND WESTERN MEDICINE are urged to scan the committee's report on page 474. Also the letter of Mr. Ben Read on page 473.

SOME COMPARATIVELY NEW DISEASES—IMPORTANCE OF THEIR STUDY

Some Important Diseases Which Are Making Their Start in California.—Because in the Pacific Slope commonwealths may be found a number of diseases not encountered in certain other sections of the United States, comment thereon may not be out of place. Several of these diseases have recently received special mention in CALIFORNIA AND WESTERN MEDICINE.

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In the April CALIFORNIA AND WESTERN MEDICINE, page 275, Reed and Meyer of the George Williams Hooper Foundation of the University of California made brief editorial comment on tropical and oriental diseases which American physicians of the tomorrow in all probability will be called upon to prevent and treat. Their remarks may well be taken to heart.

✓ ✓ ✓

Also in the April number, page 245, was printed a preliminary communication by Kofoid and Donat of the Zoölogical Laboratory of the University of California, in which attention was called to the possibilities of trypanosome infection in persons bitten by "kissing bugs," and offering the coöperation of the state university in the study of such cases.

✓ ✓ ✓

An equally interesting paper was that on onchocercosis by Johnstone and Larsen of the Pacific Institute of Tropical Medicine of the University of California. This paper was printed in the May CALIFORNIA AND WESTERN MEDICINE, page 361. The authors gave important information concerning the clinical manifestations of this little-known disease. The paper is worthy of perusal, and should be of particular interest to specialists in diseases of the eye.

✓ ✓ ✓

In this June number of CALIFORNIA AND WESTERN MEDICINE is printed a letter from

former Surgeon-General Rupert Blue, who had a prominent part in the federal effort to control the San Francisco bubonic plague outbreak in the period 1900-1910; and who was again ordered to California when bubonic plague showed itself in Los Angeles in the year 1924. Surgeon-General Blue's letter is printed on page 473.

While on the subject of bubonic plague, attention may be called to the fact that during Doctor Blue's sojourn at Los Angeles a strenuous effort was made to secure the passage of rat-proofing building ordinances in the county and city.* San Francisco has such ordinances. A special committee of the Los Angeles County Medical Association coöperated, but was unable to secure the passage of an ordinance which was drafted by Surgeon-General Blue and the writer. That effort did not go amiss, however, for this year a copy of the then proposed ordinance was given to Los Angeles County Health Officer Pomeroy, who induced the Board of Supervisors to pass it; its application applying to all buildings except residences. The residence exemption was made at this time because of the present general economic conditions. The Los Angeles City Health Department is also making an effort to secure the passage of a similar ordinance. It is hoped this effort will be successful. Such an ordinance is certainly much needed, and if not passed, the day may come when, through loss of much money and life, the city of Los Angeles will rue its disregard of this public health need. For as long as the *Bacillus pestis* is not eliminated in ground squirrels, rats and other rodents of California, bubonic plague must continue to play the rôle of a possible public health menace to our state and nation.

✓ ✓ ✓

Another article of importance which is printed in this issue of CALIFORNIA AND WESTERN MEDICINE is that by Brigadier General Munson of the United States Army Medical Corps, on the subject of "Reforestation Camps and Medical Opportunity." This paper will be found on page 422.

The picture which Munson draws of the new medical problems which may come into being when more than one hundred thousand civilian citizens are placed in the federal forest reserves located between the Rocky Mountains and the Pacific Ocean should commend itself to the serious consideration of the medical profession of the entire United States. Here again, California has reason for congratulation in its possession of the Hooper Foundation for Medical Research. Dr. Karl Meyer, director of the Hooper Foundation, and Colonel C. J. Manly, chief surgeon of the Ninth Corps Area of the United States Army, are exerting all possible effort to safeguard public health interests, and will have the active support of the entire medical profession.

✓ ✓ ✓

Psittacosis, or parrot fever, is still another disease which only a short time ago was practically unknown to American physicians. It is of special

* See CALIFORNIA AND WESTERN MEDICINE, November 1927, pages 666, 683, and 684.

interest to Californians, because the breeding of birds of the parrot family is a well developed business in Southern California. The quarantine restrictions laid down by the public health departments of the Federal Government and some of the states have been extremely irksome to many of the California bird dealers. The California State Board of Health has given much thought to a proper solution of the problem. But just at a time when it was hoped the restrictions could be lessened comes another Associated Press dispatch of May 17 from Baltimore containing this paragraph:

"The suggestion to 'kill all parrots' was made in a lecture at the School of Hygiene and Public Health of the Johns Hopkins University by Doctor Rivers, who is a member of the Rockefeller Institute for Medical Research."

From which it may be inferred that psittacosis is another disease concerning which the complete story is yet to be told.

To the above list of diseases which have their natural habitat in the Tropics and Orient, others might be added. Those named indicate how important it is to carry on further study of these diseases, which are comparatively new to the American medical profession.

STATE MEDICAL LIBRARY OF CALIFORNIA

Progress Report.—One of the statutes enacted by the Forty-ninth California Legislature of two years ago was a bill which brought into existence a state medical library (A. B. 477, Chapter 699, approved by Governor Rolph on June 9, 1931). Such a library was first proposed in these columns about four years ago. One of the arguments emphasized at that time was the statement that there was danger that the reserve funds of the California State Board of Medical Examiners might be spent for other purposes than the maintenance of public health and medical standards. Because the board's funds were not derived from general taxation sources but from extra-tax license and other fees received from physicians, it was felt that a portion of the reserve funds could be properly spent for a state medical library. The effort to bring this about culminated successfully. In view of the fact that the present legislature recently passed a law transferring some \$28,000 of the examining board's reserve funds to help purchase an office building in San Francisco, it becomes evident how well founded was the contention that there was danger of diversion of a portion of the board's funds to other than public health and medical purposes.

* * *

The Two Branches of the State Medical Library.—The State Medical Library of California has two branches—one in San Francisco, and the other in Los Angeles. Dr. Chauncey D. Leake of the University of California Medical School, who generously gives his services to the state library without salary, has been asked to submit a report on the work thus far accomplished. This report is printed in this issue, page 421.

Its perusal is commended to members of the California Medical Association, to whom it must be gratifying to know that the work has been started in efficient although modest fashion. The State Medical Library is working in closest harmony with the other medical libraries of California; but because of its limited budget the library aims for the present, particularly to be of service to those physicians practicing in rural and smaller urban communities who are not easily served through previously existing medical library facilities. From time to time other reports of this comparatively young institution will be printed. All physicians who are interested or who wish to participate in the facilities of the State Medical Library are cordially invited to write to the librarians of either the San Francisco or Los Angeles branches. The State Medical Library aims to be of real service to all physicians who seek its aid.

EDITORIAL COMMENT*

THE ACTION OF PHYSOSTIGMIN (ESERIN)

As a practical matter of therapeutics, critical clinicians have long felt that physostigmin does not directly stimulate the tissues innervated by the craniosacral autonomies in the manner of pilocarpin, but rather that it sensitizes these tissues to other stimuli or influences. For example, physostigmin does not cause, in the ordinary dosage of one milligram, severe intestinal contractions or peristalsis, but rather does it seem to make the intestinal tract more satisfactorily responsive to local stimuli normally present, such as fecal material or gas. Thus quite rationally, clinicians of the Philadelphia school frequently afford excellent symptomatic relief in "vagotonia," especially associated with heartburn and other gastro-enteric disorder, by combining physostigmin with tincture of belladonna in the same prescription. At first sight this might be thought to be a foolish combination in which the physiologic antagonists would counteract each other's effect. However, because of the foreign material in the tincture of belladonna, the atropin in it is more slowly absorbed than if it were given as the pure alkaloid and thus it has a more prolonged effect. The atropin alone, moreover, would leave the gut in an unsatisfactory atonic condition. Consequently the addition of physostigmin is quite rational in the light of the explanation offered, namely, that it sensitizes the gastro-enteric tract to whatever normal stimuli, food in particular, may influence it. Thus digestive functions are not as seriously altered as if atropin were used alone. Nevertheless, physostigmin is scarcely ever considered for the relief of postoperative intestinal stasis or other atonic conditions of the gut.

Experimental evidence supporting this critical clinical opinion regarding the action of physo-

* This department of CALIFORNIA AND WESTERN MEDICINE presents editorial comment by contributing members on items of medical progress, science and practice, and on topics from recent medical books or journals. An invitation is extended to all members of the California and Nevada Medical Associations to submit brief editorial discussions suitable for publication in this department. No presentation should be over five hundred words in length.

stigmin has recently been offered. Following the establishment of the chemical constitution of physostigmin by Stedman and Barger,¹ Loewi² suggested that it acts by virtue of inhibiting the esterase hydrolysis of acetylcholin in the body. Direct evidence supporting this suggestion was independently furnished by Matthes.³ Further evidence in this direction lies in the fact that a dose of physostigmin, which in itself has no toxic action, increases the toxic effect of acetylcholin.⁴ Since acetylcholin has been shown to be a normal constituent of body tissues and blood⁵ this theory of the mechanism of physostigmin action becomes highly probable.

What happens then in administering physostigmin is to permit the more intensive activity of the normally present acetylcholin which apparently is continually being formed in the body. This substance seems to be the normal stimulant to the tissues innervated by the craniosacral autonomies in a manner somewhat analogous to epinephrin with respect to the thoracolumbar autonomies. Epinephrin is probably detoxified by oxidation; acetylcholin is apparently prevented from reaching an abnormally high concentration by esterase hydrolysis. Physostigmin acts by temporarily inhibiting this hydrolytic destruction of acetylcholin. If physicians generally recognize that physostigmin makes possible the more intense activity of a normally functioning mechanism, there may not be so much hesitancy with regard to its practical use in the many cases where such a use is plainly indicated and where it may be advantageous.

It is interesting that the physiologic activity of physostigmin, in inhibiting the esterase hydrolysis of acetylcholin, probably resides in a portion of the molecule closely related to urethane. This has been clearly shown by Dr. and Mrs. Stedman.⁶ The synthesis of a number of aromatic urethanes resulted in compounds which possess miotic properties and other effects characteristic of physostigmin. One of these agents, miotin, is so similar in all its physiologic effects to physostigmin that even its toxic dose is the same.⁴ Physostigmin and related urethanes are probably destroyed in the body by hydrolysis in which the urethane portion of the molecule is split off from the ring structure to which it is attached. This hydrolysis may also be mediated by esterase. Physostigmin and related urethanes may, therefore, inhibit the esterase hydrolysis of acetylcholin because they have a greater affinity for the esterase of tissues than the acetylcholin which is normally present in the tissues. When physostigmin is absorbed and distributed through the body, it appropriates for its own hydrolytic destruction the esterase normally engaged in hydrolyzing acetylcholin, thus permitting an increased accumu-

lation of acetylcholin and an intensification of the latter's physiologic effects. As soon as the hydrolytic destruction of physostigmin is completed, the esterase returns to its usual task of splitting up acetylcholin. This is a suggestion which remains to be studied.

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FRACTIONAL AND REDUNDANT ANTISERUMS

v†

The recent demonstration by Doctors Bailey and Shorb¹ of Johns Hopkins University, that all types of pneumococci and certain strains of streptococci contain the Forssman lipoid, is one of the most important contributions of the last decade to the basic theory of clinical serology. Their work has just been confirmed by European investigators.²

For twenty years clinicians have been spared the necessity of familiarizing themselves with this theoretically interesting lipoidal factor.³ First discovered in sheep erythrocytes, this lipoid (or its immunochemical equivalent) was afterward demonstrated in the blood or fixed tissues of numerous other animal species. It is found, for example, in the guinea pig and the horse, but is not demonstrable in man or in the rabbit. Heretofore, it has been isolated only from certain relatively rare bacterial strains, from occasional strains of *B. paratyphosus*, for example, and from a few strains of the dysentery bacillus.

Theoretical interest in this Forssman lipoid arose from the fact that the presence or absence of this lipoid (or its equivalent) in the tissues of any animal species seemed to determine its antigenicity for that species. Injected into Forssman-negative rabbits, for example, lipoid-positive *B. paratyphosus* strains stimulate the production of an antilipoidal, complement-deviating serum function. In contrast with this, the homologous antiserums obtained from the Forssman-positive horse are deficient in this antilipoidal serum function. Antiparatyphoid horse serum, therefore, does not necessarily transfer to the rabbit a full multivalent humoral immunity against *B. paratyphosus*. It transfers only a fractional humoral immunity, whose success or failure cannot be predicted on purely theoretical grounds.

This theoretically interesting fractional antiserum now becomes of practical clinical significance. Since the Forssman lipoid is allegedly present in all pneumococcus types, antipneumococcus horse serums must be deficient in an antibody factor presumably necessary for full

¹ Stedman, E., and Barger, G.: Jour. Chem. Soc., 127:247, 1925.

² Loewi, O., and Novratil, E.: Pflüger's Arch., 214:689, 1926.

³ Matthes, K.: Jour. Physiol., 70:338, 1930.

⁴ White, A. C., and Stedman, E.: Jour. Pharmacol. Exper. Therap., 41:259, 1931.

⁵ Dale, H. H., and Dudley, C. H.: Jour. Physiol., 68:97, 1929.

⁶ Stedman, E.: Biochem. Jour., 20:19, 1926; and 23:17, 1929.

† Part I of this series was printed in the February CALIFORNIA AND WESTERN MEDICINE, page 116; Part II in March, page 188; Part III in April, page 275; Part IV in May, page 380.

¹ Bailey, G. H., and Shorb, M. S.: Amer. Jour. Hyg., 13:831, 1931.

² Eisler, M., and Howard, A.: Zeitschr. f. Immunitätsforsch., 76:461, 1932.

³ For résumé of earlier facts, see: Jordan, E. O., and Falk, I. S.: The Newer Knowledge of Bacteriology and Immunology, Chap. 53, p. 733, 1928.

multivalent antipneumococcus humoral immunity in man. Man, like the rabbit, belongs to the Forssman-negative group.

Of equal theoretical interest is the bearing of redundant fractional humoral antibodies on interspecies transfer of specific immunity. Antiparatyphus horse serums, for example, which contain no anti-Forssman factor, is practically nontoxic for guinea pigs. Antiparatyphus rabbit serum, however, which contains this antilipoidal factor, is lethally toxic for Forssman-positive guinea-pig tissues. Intravenous injection of even small doses of certain antiparatyphus rabbit serums will kill guinea pigs in from two to four minutes, with symptoms resembling acute anaphylactic shock.

The high toxicity of certain proposed but clinically discarded antibacterial horse serums suggests a somewhat analogous production of antihuman cytotoxins in the horse. If this suggestion is correct, proper fractionation of these toxic anti-serums might conceivably render them clinically nontoxic.

Stanford University.

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Palo Alto.

IMPAIRED VIBRATORY SENSIBILITY

For some time I have been impressed with the fact that in many patients who suffer from disturbance of deep sensibility it is not unusual to find that vibratory sensibility is markedly diminished or even absent. Interestingly enough, in many such patients one finds an apparently perfect preservation of deep joint sensibility. This combination is of more than passing interest, as it is believed that the same anatomical pathways from the periphery to their final destinations are traversed by both modalities of sensation. Both vibration and deep sensibility enter the cord via the long fibers of the posterior root system and ascend in the dorsal columns to the thalamus and brain. Some medium fibers, however, enter the column of Clark and proceed to the cerebellum via the tracts of Flechsig and Gowers.

It is interesting to speculate, therefore, as to the reason why one type of sensation is so often impaired while another, which apparently has precisely similar connections, remains functionally normal. In two patients whom I have recently had occasion to examine, the vibratory sense, as tested with a tuning fork, over the malleoli and tibiae, was practically absent, only the strongest vibrations being even perceptible. In both of these patients, however, there could not be found any demonstrable impairment of deep joint sensibility. The shortest range of movement of the great toe was immediately perceptible, and neither patient was ever in doubt as to the exact location in space of the joint.

It is also common to find pallanaesthesia (loss of vibratory sense) as one of the earliest objective phenomena in both tabes and subacute combined degeneration of the spinal cord. In many such patients it will be found that no impairment of deep joint sensibility is detectable, or if so, to a much less extent.

It has occurred to me that a possible explanation for this apparent paradox lies in a principle which has a broad application in all neurophysiology. Those functions and structures which are phylogenetically oldest and, therefore, usually most essential to the primitive essential mechanisms of the organism are, taken by and large, best able to withstand the vicissitudes of life and the various insults both traumatic and pathologic which beset them. Surely, in the example referred to here, deep joint sensibility, as compared to vibratory sensibility, is more constantly employed, is probably acquired earlier in life and, moreover, subserves a more essential and necessary function in maintaining equilibrium and consciousness of spatial relations. Vibratory sensibility, therefore, may well be considered to be a special sense added to the sensorium of man in order to acquaint him more accurately with a finer discrimination of a special type of sensation. It is not therefore biologically in any way essential for the preservation of health or for the purposes of defense of self-protection. On the other hand, when man is deprived of his sense of deep joint sensibility, he is unable to account properly for the position of his extremities in space, and such maladaptation may entail numerous disturbances of equilibrium, balance, and gait, which constitute serious disadvantages in his relationship to his environment.

Summary:

1. It is common to find impaired or absent vibratory sensibility with intact deep joint sensibility.
2. These two types of deep sensibility have the same anatomical pathways and central connections.
3. The probable explanation of this disassociation lies in a widely applicable neurophysiological principle which conforms to the biological economy of man, and is developed on a phylogenetic basis.

350 Post Street.

MARK GERSTLE, JR.,
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Osteopaths Again Attempt to Obtain Registration in England.—The failure of previous attempts of the osteopaths to obtain legal recognition has been described. They are now making a further attempt. In the house of commons a private member asked leave to introduce a bill on the registration and regulation of osteopaths. The bill proposes to set up a statutory board to compile a register of qualified osteopaths and to supervise the admission to that register of persons who have followed a prescribed course of study and acquired a prescribed standard of professional competence. The member said that under the bill "an incompetent and unqualified charlatan and quack would be debarred from practicing osteopathy." It was added that osteopaths did not seek inclusion in the general medical profession; all they asked was recognition by the legislature to regulate their own affairs with a view to protecting the public. Leave to introduce the bill was granted. Probably the result will be the same as in previous attempts. The government will say that it cannot recognize two different kinds of medical practitioners and that it is open to osteopaths by going through the ordinary medical course to obtain registration and then practice osteopathy.—London News Correspondence.

C. M. A. DEPARTMENT OF PUBLIC RELATIONS

An open forum for progress notes on the department's activities, and for brief discussions on medical economics. Correspondence and suggestions invited. Address Walter M. Dickie, Room 2039, Four Fifty Sutter Street, San Francisco. This column is conducted by the Director of the Department.

Sacramento County Health and Welfare Board

The Public Relations Committee of the Sacramento Society for Medical Improvement has been successful in having incorporated in the new charter for Sacramento County a most constructive piece of legislation for the care of the indigent sick of the county.

County Health and Welfare Board.—The charter provides for the formation of a County Health and Welfare Board which shall consist of seven members. Two doctors of medicine selected by the county medical society, one dentist selected by the Sacramento dental society, the county executive, the chairman of the Board of Supervisors, and two electors from the fourth and fifth supervisorial districts.

The duties of this board are defined as follows:

Said board shall advise the county executive concerning all services to be rendered throughout county hospitals, health centers and clinics throughout the county, and it shall also determine the locations of such clinics and health centers as may be necessary, and shall establish such clinics and health centers as shall be necessary to supply the services to the indigent sick of the county, and make rules for the admission of patients thereto, and it shall direct and supervise the county health and disease prevention program of all the agencies, both public and private, engaged in the work in the county of Sacramento.

(a) It shall advise concerning the expenditures of all funds allocated or appropriated by the county of Sacramento for all medical or dental services, or prosthetic appliances, and for the prevention and control of diseases and for the promotion of public health.

(b) Said board shall be vested with such other powers and functions, and shall perform such other duties as are now or may hereafter be vested in or conferred upon it by general law or this charter, or by ordinance of the Board of Supervisors.

Said board shall advise the county executive concerning the appointment of all persons who furnish, and all county employees employed in agencies and institutions which furnish said medical or dental services to the indigent sick, subject to laws and ordinances, and this charter.

The Sacramento County Hospital shall be so called, and shall be maintained for Sacramento County indigents only.

* * *

Plan for Care of Indigents and Semi-Indigents in Fresno County*

By H. M. GINSBURG, M. D., *Fresno*

Fresno County, during the past month, formulated a plan which has received the approval of the Board of Supervisors and has been unanimously adopted by the Fresno County Medical Society. This plan limits admissions to the General Hospital to absolute indigents and sends back to the private physicians patients who are bordering on indigency. The success of the plan depends upon the extent of cooperation between the medical profession and the Social Service Department connected with the General Hospital. This plan, in the main, is similar to others in use, especially the Alameda plan, modified to meet the local necessities.

Under this plan, all medical and surgical patients in Fresno County are classified into two main groups—accident or emergency cases demanding immediate

care, and elective cases, or those not in need of immediate care.

The accident or emergency cases are admitted to the General Hospital for emergency care, without preliminary investigation. An investigation conducted after admission determines eligibility. If not eligible, and condition permitting, patient is asked to make arrangement for care in a private hospital and is billed at private hospital rates for the care given in the General Hospital.

The elective cases are considered under five groups, namely: (a) Indigent, (b) Part Pay, (c) Pay, (d) Non-eligible, and (e) Nonresidents.

The *Indigent Group* is referred to the General Hospital for hospital or out-patient treatment.

The *Part Pay Group* comprises patients who can afford to pay very little for medical care but who desire to retain their self-respect by meeting their obligations. The Social Service Department, after a social service interview, determines what the patient can justly afford to pay. The medical society will furnish a list of physicians who have agreed to care for these patients at prices established by the Social Service Department. The charge may be as low as twenty-five cents. The patients are permitted their choice of physician. Where no preference is shown, physicians on the list will be called in rotation. Patients residing outside Fresno City will be referred to physicians in their own territory.

If, after preliminary examination, the physician feels that he cannot afford to care for the patient for the amount specified by the Social Service Department, he may refer the patient back to the General Hospital. Physicians may also demand a second social service investigation if they are convinced that the patient can afford to pay more than the established fee. Physicians and agencies will urge this group to participate in hospital insurance.

The *Pay Group* comprises patients who can afford to pay the physician for his medical attention at the regular or at somewhat below the usual rate. This group, however, cannot also afford hospitalization at the present time. To these patients, the physicians and other agencies should attempt to sell the Hospital Insurance. This insurance plan is similar to other hospital insurance plans. It provides patients with hospitalization for \$12 per year, payable on a monthly installment basis. This hospital insurance is to be under the supervision of the Fresno County Medical Society. If hospitalization is necessary, before elapsed period, as specified in the hospital plan, physician may refer the cases to Social Service Department for disposition. A Social Service worker will contact such patient and determine whether or not he can meet hospital rates on the installment plan. Such patient will then be sent to a private hospital if such is willing to accept him on an installment plan; otherwise he will be referred to the General Hospital for care. Noneligibles are referred to private physicians and receive no treatment in the General Hospital unless entered as an accident or emergency case. Nonresidents are not eligible in the General Hospital unless the case is one of extreme emergency. Otherwise the patient will immediately be referred to the county where the residence has been established.

There was also created an *Advisory Admission Commission* to handle disputes and doubtful cases. The commission consists of six members, which are as follows: (a) Member of Board of Supervisors, chairman, Hospital Committee; (b) Director of Welfare Depart-

* From the Office of the Director, Fresno County General Hospital.

ment; (c) Director of General Hospital; (d), (e) and (f), members of Fresno County Medical Society.

This commission will elect a chairman to handle minor disputes and receive reports on all cases handled through the Social Service Department. The decision of the commission shall be final as to the eligibility of a patient for county care.

* * *

Fresno County Medical Society's Resolution Concerning the Medical Care of Indigent and Semi-Indigent Citizens †

WHEREAS, The members of the Fresno County Medical Society realize the importance of maintaining an adequate medical and hospital service for patients who are not able to pay the usual fee and who do not appear eligible for care at the expense of the taxpayers under the Indigency Act of the State of California; and,

WHEREAS, It therefore appears necessary to establish a plan whereby certain patients, formerly cared for at the county's expense at the General Hospital and Clinic, and elsewhere, who are not technically indigent, and who are in need of attention by reputable doctors of medicine or need hospital care at a cost within the ability of these patients to pay; now, therefore be it

Resolved, That the Fresno County Medical Society agrees to establish a list of doctors of medicine who will volunteer to accept calls for such patients and render service when called by the established social service and welfare department of the county at the home of the patient, or at the physician's office and charge such patient according to his ability to pay, and secure and furnish to the social service department a brief report of such information as he may be able to obtain as to the patient's social and financial circumstances; and continue the care of such person as a private patient if circumstances permit; or if such patient is found frankly indigent, to turn the care of such patient over to the county institutions, and in such cases charge no fee; and be it further

Resolved, That hospital insurance contracts be offered patients of this class whenever it appears such patients can afford to pay approximately one dollar per month for such service, and that such insurance service be offered by the County Medical Society under the Mutual Hospital Service Plan or by some other plan controlled by medical men and endorsed by the medical society; and be it further

Resolved and Agreed, That the coöperation of the County Board of Supervisors and Social Service agencies be requested in making a practical and helpful application of this plan, and that improvements and modifications of details of this plan be worked out from time to time as may be required.

† Resolution voted upon and adopted at a special meeting of the Fresno County Medical Society held on April 11, 1933.

Artificial Respiration by Rocking.—Dr. F. C. Eve, consulting physician to the Royal Infirmary, Hull, has described in the *Lancet* a new method of artificial respiration, which has the advantages that it requires only simple and easily improvised apparatus and can be used in acute illness. It consists in laying the patient on a stretcher, pivoted at its middle on a trestle and rocking up and down rhythmically, so that the weight of the viscera alternately pushes the flaccid diaphragm up and down. Doctor Eve has found this method so efficacious in a healthy person that he need not breathe voluntarily—it is done for him. The amount of air expired with one rocking is 1,500 cubic centimeters, while Schäfer's method gives only 1,000 cubic centimeters. Thus the method would easily give more than the 6,000 cubic centimeters of air per minute that is said to be necessary.

Doctor Eve illustrates the use of the method by two cases. In a girl, aged two years, nasal speech, regurgitation, and weakness of the legs and neck were ob-

served a month after the onset of diphtheria. Suddenly she became alarmingly ill and was apparently drowning in her bronchial secretions. The epigastrium did not rise on inspiration. She was put on her side, so that the trachea sloped downward. Breathing became easier, and tenacious mucus could be removed from the mouth. The position was retained for ten hours. It then occurred to Doctor Eve that, while the position was excellent for drainage, there was a risk that the weight of the abdominal viscera might push up the diaphragm and cause some collapse of the lungs with risk of pneumonia, but that if a slow seesaw movement was provided the diaphragm would be pushed up and down in imitation of natural movements. A bed was made in a rocking chair and a towel pinned from one arm of the chair to the other to prevent the child from slipping when the chair was tilted through 30 degrees on each side of the horizontal. This was done continuously ten times a minute for two days except during meals. The child appreciated the rocking, which conduced to sleep. On the third day spontaneous epigastric movements returned. From the tenth day costal respiration ceased for four days, but this caused no symptoms. Recovery slowly ensued. The second patient was a robust man of twenty-four who had Landry's paralysis. The legs were paralyzed, the arms were weak, and the diaphragm was not moving, but the upper ribs were dragged up by the sternomastoids. Ordinary methods of artificial respiration would not have been tolerated. He was lashed to a stretcher that had been pivoted on a trestle. Artificial respiration was performed by rocking 50 degrees each way, four seconds in the leg-down, and three seconds in the head-down position. The rocking relieved him and he demanded it for about five minutes every quarter of an hour. Contractions returned in the diaphragm, but he died from heart failure.—*London News Letter (Journal of the American Medical Association)*.

A Plan to Distinguish Between Chloroform and Ether.—

As the mistake of confusing chloroform with ether has been made, the question of safeguards has been discussed in the *British Medical Journal*. One correspondent suggests that a distinctive dye should be added to chloroform. Messrs. Duncan and Flockhart, the manufacturers of chloroform, state that in about 1908 they made experiments at the wish of some anesthetists. They were successful in producing red chloroform that was stable and free from anything objectionable. But the demand for it was comparatively small and gradually diminished.

As there might be difficulty in relying on the purity of colored chloroform, L. F. G. Simmons and C. G. A. Sadler of the National Physical Laboratory have had made some glass density balls of a size to drop into the bottles used to contain anesthetics. These balls are easily made of such a density that they float in chloroform and sink in ether. Further, being blown from capillary tubing, they have a projection where they are sealed off. When put in the usual mixture of two parts of chloroform to three of ether, they float below the surface with the projection downward, whereas in chloroform they float on the surface with the projection almost level. Thus, if the anesthetist has one of these balls in each of the bottles in his bag or on the anesthetic table he can tell at a glance what the bottle contains, even should some one pour chloroform into a bottle already containing ether. These balls are to be put on the market.—*Journal American Medical Association*, Vol. 100, p. 19.

Certainly physicians cannot prolong our lives by a single day. We live as long as God wills; but it makes a great difference whether we live miserably, like poor dogs, or keep well and fresh, and here a wise physician can do much for us.—Goethe.

Vital statistics has been defined as "the bookkeeping of public health," and on analysis it also provides a fair index of the status of employment.—*Ohio Health News*.

STATE MEDICAL ASSOCIATIONS

This department contains official notices, reports of county society proceedings and other information having to do with the state associations and their component county societies. The copy for the department is edited by the state association secretaries, to whom communications for this department should be sent. Rosters of state association officers and committees and of component county societies and affiliated organizations, are printed in the directories noted under Miscellany, on the front cover index.

CALIFORNIA MEDICAL ASSOCIATION

GEORGE G. REINLEPresident
CLARENCE G. TOLAND.....President-Elect
EMMA W. POPE.....Secretary-Treasurer

OFFICIAL NOTICE

Application for Place on Annual Program.—Members who desire to present papers before the 1934 annual session, which will be held at Riverside, should write to the secretary of the section before which the particular subject should be presented.

Names and addresses of section officers are regularly published on advertising page 4 of each issue of CALIFORNIA AND WESTERN MEDICINE.

When requesting place on the program, a brief résumé of the paper should accompany the application.

HOUSE OF DELEGATES

Minutes of the Twenty-Ninth Meeting of the House of Delegates of the California Medical Association.

First Meeting of the House of Delegates of the Sixty-Second Annual Session.

Held in the Bali Room, Hotel Del Monte, Del Monte, California, Monday, April 24, 1933, at 8 p. m.

I. Call to Order.—The meeting was called to order by the Speaker, Edward M. Pallette of Los Angeles.

* * *

II. Report of the Speaker on the Personnel of the Credentials Committee and Two Reference Committees.—The Speaker stated that the first order of business was the announcement of the members of the three committees of the House of Delegates. The Speaker stated that the Credentials Committee consisted of Lemuel P. Adams of Oakland (chairman), Charles T. Sturgeon of Los Angeles, and J. L. Maroon of Santa Ana; that the Reference Committee on Reports of Officers and Standing Committees consisted of Alson Kilgore of San Francisco (chairman), E. Eric Larson of Los Angeles, and P. K. Gilman of San Francisco; that the Reference Committee on Resolutions and New and Miscellaneous Business consisted of William R. Molony of Los Angeles (chairman), Lyell C. Kinney of San Diego, and Irving Ingber of San Francisco.

* * *

III. Report of the Credentials Committee.—Lemuel P. Adams of Oakland, chairman of the committee, presented the report of the committee, and stated that the list of delegates and alternates had been checked and found to be correct.

The Speaker stated that the members of the House of Delegates who were seated at the first meeting would serve as delegates on Wednesday evening unless a seated delegate relinquished his seat.

* * *

IV. Roll Call.—The secretary called the roll; one hundred and twenty-one members of the House of Delegates, consisting of officers, delegates, and alternates, were seated and the Speaker declared a quorum present.

V. Address of the President.—The Speaker announced that Joseph M. King, president, would address the House of Delegates. Doctor King then addressed the delegates as follows:

To the Speaker and the House of Delegates:

I note with a sense of gratification that our membership has not decreased in the past year and an increased interest is being shown in various parts of the state in the work of our Association. You will find before you a petition for a charter from Del Norte County signed by every physician within its borders, and while it is true that these are few in number, it must be remembered that Crescent City lies some ninety miles north of Eureka, in Humboldt County, to which they must now go to attend meetings. I recommend the issuance of this charter.

Kings County has also presented a petition signed by ten physicians out of sixteen living in the county. I also recommend the issuance of this charter.

Undoubtedly similar societies should be organized in Modoc County and in Lake County as well.

Meetings are again being held in Mendocino County, in which there had been no meeting for some two or three years.

It is also a source of gratification to realize that our expenditures have not exceeded our receipts even though we have failed in adding the usual \$9,000 or so to our surplus funds. The causes of this have been twofold: (1) Acting under the instructions given by this House two years ago, a Department of Public Relations has been established with offices, clerical help, and a full-time director. (2) Due to the stringency prevailing and in common with all publications throughout the land, the advertising in CALIFORNIA AND WESTERN MEDICINE has been decreased so materially that our income from this source has diminished some \$5,000. I urge this body, therefore, to plan to limit current expenditures to current income. This will not be easy with the dues reduced to \$8, thus reducing the income of the society some \$10,000 during the next year. While it is true that we have a very considerable surplus, it is equally true that we should keep a balanced budget, and this can only be maintained if current expenditures are kept within our current income. Recognizing the necessity for economy the Council, on the suggestion of Doctor Roblee, directed the president of the Association to appoint a committee of five members to survey its financial affairs; three to be members of the Council, and two to be chosen from the society at large, neither of these to be members of the Cancer Commission nor of the Department of Public Relations. I therefore appointed a committee, consisting of Doctors W. W. Roblee of Riverside (chairman), Carl R. Howson of Los Angeles, George G. Reinle (president-elect) of Oakland, Morton Gibbons of San Francisco, and Dewey R. Powell of Stockton to make this survey.

Undoubtedly the Council plans to live within the funds with which you provide them, and I recommend to you that you pass no legislation requiring the expenditure of funds without a careful consideration of our financial structure.

It is undoubtedly wise and proper that certain expenditures, neither current nor routine in character, should be paid from our surplus. This could well include any legal expense incurred in connection with our members' interests in county hospital matters, any special appropriation in connection with our legislative program, and other items of similar character.

In this connection I desire to call your attention to the fact that there are apparently a large number of

corporations illegally practicing medicine in this state to the extent that during the past year the office of the Attorney-General of the state of Iowa made inquiries of the office of the Attorney-General of California concerning the method one of these corporations is operating under, in order to defeat the general rule that a corporation may not practice medicine. In the opinion of our own Counsel and of other eminent legal gentlemen as well, this is a question which the medical profession must meet and face sooner or later. We have already permitted this corporate practice of medicine within our borders to go on to such an extent that it is freely predicted that its eradication or control will be no easy task. The whole question, by direction of the Council, will be laid before you later this evening by our legal counsel, and it will remain for this body to decide what is wisest to do. Such a campaign would undoubtedly require the expenditure of considerable money, and if we as a medical association should undertake to prosecute this matter, the further question arises as to whether action should be taken at this time or deferred until a later date. The longer we procrastinate the harder the task will be. The question arises as to whether this is not a function of the State Board of Medical Examiners, for the suppression of illegal practice comes within its scope and powers. Further and more complete discussion of this whole matter will undoubtedly be given you by Mr. Peart. But when and if you decide to take any action it seems to me that the expenses connected therewith can well be taken from our surplus funds.

Our legislative program is one that cannot well be discussed at this time with the legislature still in session, but we can congratulate ourselves on the prompt disposal of the iniquitous measures for opening county hospitals to practically all classes of patients. On the other hand, we can see the need for more extensive organization when the State Sheriffs' Association and individual sheriffs can defeat such a humanitarian measure as Assembly Bill 539 relating to the commitment of the insane, a bill which not only required no added expenditure on the part of the taxpayers, but would save a very considerable sum to the state.

In this connection I wish to call your attention to the resolution introduced into the Senate on March 28 by Senator Williams of Tuolumne relating to the appointment of a Senate committee to investigate and report on a "Health Insurance Act" for the reduction of the high cost of sickness. This resolution was passed on April 12, and the president of the Senate, Lieutenant-Governor Merriam, appointed as such committee Senators Williams, Difani, and Tickle. Under this resolution it is made a duty of this committee to confer and advise with the State Board of Health as to the scope and provisions of such an act, if in the opinion of the committee such an act be advisable. I submit to you that the State Board of Health as such is not concerned with the private practice of medicine, and that no body or set of men is more concerned therewith than the members of this Association, and I therefore suggest to you that you instruct the Council to study this matter thoroughly through its Department of Public Relations, and after conferring with our parent organization, the American Medical Association, as to the advisability of such legislation, and particularly as to the probable ultimate outcome to the public and to the profession of any plan which the Council might consider, to report back to this body one year hence that final action binding on this House and on its various official bodies may be taken. I furthermore recommend that the findings of the Council with its recommendations shall be published in the *State Journal* not less than two months prior to the next annual meeting, that thorough discussion may be had in the component county units of this organization prior to final action thereon.

Our organization work has gone on quite smoothly throughout the year. I would, however, recommend that some changes be made in the method of the appointment of committees in order that the relationship

between the Department of Public Relations and the Council may be clarified. I would suggest that the Council be not only empowered, as at present, to nominate the members of the standing committees, but that they also be empowered to nominate the chairmen of these committees as well.

In this connection I would ask you to consider, in view of the great authority and responsibility which you seem to be about to place upon the chairman of the Committee on Public Relations, as to whether it would not be wise for him also to be appointed by this House after nomination by the Council. I make no particular recommendation in this matter, but suggest its careful consideration. These suggestions can easily be affected by slight changes in the by-laws and should they not prove satisfactory could easily be altered again.

I regret that I have not been able to do my full duty as president, but the hearty and whole-hearted coöperation I have received and the great willingness of everyone to do his bit in the most cordial manner has not only been an inspiration to me but of great benefit to the organization. While there may be differences of opinion among our members from time to time, I see an increasing unity in our ranks, and "In union there is strength."

Respectfully submitted,

JOSEPH M. KING, *President.*

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The Speaker announced that the address of the president would be referred to the Reference Committee on Reports of Officers and Standing Committees.

* * *

VI. Report of the Council.—The Speaker stated that on account of illness Dr. O. D. Hamlin, chairman of the Council, was unable to be present and that the report of the Council would be presented by T. Henshaw Kelly of San Francisco, vice-chairman of the Council. Doctor Kelly then presented the following report:

To the Speaker and the House of Delegates:

Since the report of the secretary-treasurer gives to the House of Delegates the membership and financial status for the year 1932, the report of the Council will omit these and consider in detail the actual problems that have come before that body for consideration and action during the year.

CHARTERS

At the request of members of the Tuolumne County Medical Society, a survey of the eight doctors in the county was made by the district councilor to ascertain whether they desired to revive the inactive Tuolumne County Medical Society or to affiliate with another county society. The only doctors from whom replies could be obtained stated that they preferred to affiliate with the San Joaquin County Medical Society. The Council therefore recommends that the House of Delegates cancel the charter of the Tuolumne County Medical Society and allow physicians in that county to affiliate with the society of their choice.

In accordance with the petition signed by the five licensed physicians in Del Norte County, the Council on January 21 recommended that a charter be granted to the Del Norte County Medical Society by the House of Delegates.

At the request of the licensed physicians in Kings County, the Council on April 23 recommended that the House of Delegates grant a charter to the Kings County Medical Society.

HONORARY MEMBERSHIP

At the request of the board of directors of the San Francisco County Medical Society, the Council recommends that honorary membership in the California Medical Association be granted Henry Harris, M. D., who is the author of a medical history of California.

CLINICAL AND RESEARCH PRIZES

The Council upon the recommendation of the Committee on Clinical and Research Prizes recommends that the clinical prize be awarded to Garnett Cheney, San Francisco, author of the paper "The Morphology of the Erythrocytes in Cirrhosis and Other Disorders of the Liver"; and that the research prize be awarded to Howard A. Ball, San Diego, author of the paper "Some Observations on the Altered Physiology of Hypophysectomized Albino Rats."

Honorable mention is given to the paper of Samuel Hanson of Stockton, entitled "The Narrow Bispinous Diameter of the Persistent Occipitoposterior Position," and "Experimental Gastroduodenostomy" by Harold Thompson of San Diego.

ANNUAL DUES

The Council presents the matter of annual dues of the Association to the House of Delegates without recommendation.

COMMITTEE ON SURVEY OF EXPENDITURES

This committee, appointed by the Speaker of the House of Delegates and the chairman of the Council by direction of Resolution No. 3 of the House of Delegates in 1932, after studying the accounts of the Association submitted to its members by mail, met in San Francisco on May 21, 1932, and spent a whole day in discussion and the formulation of recommendations concerning the expenditures of the Association.

Following the recommendation of this committee, the Council at its meeting on May 28, 1932, fixed the salaries of the secretary, the editor, and the director of public relations at \$4,000 \$4,000, and \$4,800 per year, respectively. The annual retainer paid to the general counsel was left unchanged at \$4,000 because of the added work thrown upon that office by the creation of the Department of Public Relations.

The Council suggested that work might be done by committees of the Association that might otherwise require meetings either of the Council or of the Executive Committee, and pursuant to this policy the chairman of the Executive Committee called but three meetings of that committee during the year—two required by the Constitution and By-Laws, and one to consider matters referred to it by the Council at its meeting on January 21, 1933. The transportation expenses of the Executive Committee for the year were \$193.30.

The Committee on Public Relations held eight meetings during the year to consider, among others, matters which would ordinarily have come before the Executive Committee, and its transportation expense for the year was \$1,045.85.

The Council will at the end of the 1933 session have had nine meetings during the year—the organization meeting after the annual session at Pasadena on May 5, 1932; one on May 28, 1932 at San Francisco, required by the Constitution and By-Laws of The Trustees Of The California Medical Association to be held yearly; a third on September 24, 1932, at Los Angeles, required by the Constitution and By-Laws of the California Medical Association, at which the report of the Committee on Public Relations regarding medical and hospital service plans was considered; the fourth meeting on January 21, 1933, at San Francisco to consider legislation and other matters of Association business; a fifth, called at San Francisco on March 4, 1933, to consider important matters of legislation, and four meetings will be held during the annual session at Del Monte.

The comparative figures of transportation expense for meetings of the Council, Executive Committee, and Committee on Public Relations for 1931 and 1932 are as follows:

	1931	1932
Council	\$ 753.27	\$ 875.12
Executive Committee	497.03	193.30
Committee on Public Relations....	361.30	1,046.85
	\$1,611.60	\$2,115.27

Nineteen thirty-two does not compare favorably with 1931 in regard to expenditures for committee travel.

The allocation of 25 cents per member to Barlow and Lane Libraries was continued in 1932 as the committee recommended.

The annual prizes for the best papers submitted on research and clinical subjects were continued and the names of the successful candidates are given elsewhere in the report.

Because of the requirement in the constitution that a directory of members be published each year, a list of all members in good standing on January 1, 1933, was published in the February issue of CALIFORNIA AND WESTERN MEDICINE. This saves the Association some \$2,000, but there is considerable question as to whether the present type of directory is worth even its present cost of \$263.

Because of the cost of printing a special pre-convention bulletin and the few copies that were needed, the committee recommended that it be published as a section in the program number of CALIFORNIA AND WESTERN MEDICINE, where it is available to all of the members of the Association, and this has been done this year. None will, therefore, be distributed to the members of the House of Delegates.

The committee also made a number of recommendations in regard to the allocation of the work of the Association and of CALIFORNIA AND WESTERN MEDICINE to the various stenographers in the office and concerning the allocation of costs to the California Medical Association and CALIFORNIA AND WESTERN MEDICINE so that the books would show the actual figures of income and expense in both cases.

These recommendations were put into effect and a new system of accounting installed which has greatly simplified the work of the office and which permits the rapid analysis of any item that may be asked for.

STANDING COMMITTEES

In order that thorough consideration might be given to the selection of nominees for membership on the standing committees of the Association, the Council appointed Doctors Schaupp, Duffield, and Harris to act as a committee to recommend names to the Council for election as members of these various committees. The recommendations of the committee will be acted upon by the Council and in turn by the House of Delegates.

COMMITTEE ON PRACTICE OF PHYSICAL THERAPY

At the September Council meeting, at the request of John Severy Hibben of Pasadena, the Council authorized the appointment, by the president, of a committee to survey and investigate the practice of physical therapy in California. This committee consists of Doctors Hibben, Pasadena; Atsatt, Santa Barbara; Langnecker, San Francisco; Naffziger, San Francisco; Lowman, Los Angeles.

The committee began its work by questionnaires to fifty-one hospitals in the state dealing with their practices in physical therapy and an investigation of the training, education and licensure of physical therapy technicians.

The committee has also begun work in the educational field in physical therapy and recommends that a paper on physical therapy be given in each section at the next session of the California Medical Association, to spread a more rational view of the indications for and limitations of physical therapy; the continuation of educational work; and the continuance of the work of the committee.

LEGAL DEPARTMENT

The legal department of the Association, Hartley F. Peart, general counsel, and Hubert T. Morrow, associate general counsel, has spent an immense amount of time and energy upon the affairs of the Association during the past year.

The general counsel has attended all of the meetings of the Council and Executive Committee and all but one of the meetings of the Committee on Public

Relations. He prepared all of the skeleton organization forms for the medical and hospital service plans recommended to the Council by the Committee on Public Relations; he has spent a great deal of time and work in the matter of the suits concerning the use of county hospitals in Santa Barbara and Kern counties, this involving much time spent out of San Francisco; he has devoted a great deal of effort to the formulation of proposed legislation at Sacramento, and has in all other ways open to him served the interests of the California Medical Association.

The details of his activities, undertaken at the behest of the Council, are best presented by him in his report and may give an idea of what his service to the Association means.

COUNTY HOSPITALS

The deplorable extension of the service of county hospitals in a number of counties to residents of the county amply able to pay for medical, surgical, and hospital service elsewhere, and in some instances, with the express intention upon the part of those charged with operation and conduct of said hospitals of maintaining and operating these institutions as general public hospitals regardless of the effect upon private hospitals, the tax rate and the members of the profession, has been given serious thought and consideration during the last year.

In two counties test cases have been commenced by taxpayers to determine the law in reference to the matter. The subject will be more fully covered by the general counsel in his report.

PENDING MEDICAL HOSPITAL SERVICE PLANS

The Council has watched with interest and aided the development of proposed hospital service plans in San Diego and Alameda counties and of plans for the cure of indigent and semi-indigent sick in Alameda, San Diego and Fresno counties, and for combined service in Santa Clara County, details of which are published from time to time in CALIFORNIA AND WESTERN MEDICINE or in the bulletin of the Department of Public Relations.

POSSIBLE AMENDMENTS TO CONSTITUTION AND BY-LAWS

As there is pending before the House of Delegates amendments to the constitution, making the chairman of the Committee on Public Relations a member of the Council and the Executive Committee, the Council has had Mr. Peart, the general counsel of the Association, prepare, in proper form, amendments to the by-laws, necessary to complete the proper organization of this committee, as follows:

- Amendment to Chapter V, Section 1.
- Amendment to Chapter V, Section 5.
- Amendment to Chapter V, Section 20 (a).
- Amendment to Chapter V, Section 20 (b).

And the Council submits these to the House to be acted upon if the amendments to the constitution are adopted.

The following resolution was submitted to the Council by the sections on Anesthesiology, Pathology, Bacteriology, and Radiology and is submitted to the House of Delegates for its action:

WHEREAS, It is becoming increasingly common for hospitals, lay individuals, groups and corporations to provide the services, skill, and knowledge of physicians at a profit to themselves; and

WHEREAS, The practice of medicine, including as it does anesthesiology, pathology and radiology, is being altered thereby for the worse; be it

Resolved, That such provision is inimical to the interests of the patient, the public, and the medical profession.

Respectfully submitted,

T. HENSHAW KELLY, *Acting Chairman.*

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The Speaker announced that the report of the Council would be referred to the Reference Committee on Reports of Officers and Standing Committees.

VII. **Report of the Committee on Survey of Expenditures of the Association.**—At the request of the Speaker, William W. Roblee, chairman of the committee, presented the report of his committee, as follows:

To the Speaker and the House of Delegates:

Immediately upon receipt of the names of those comprising the committee, the chairman outlined the activities of the committee and assigned certain portions to individual members for leisurely survey and report.

The committee spent the forenoon of April 22 in a careful review of the reports and desires to submit the following recommendations:

We have praise for every department for the financial handling of every part of the Association's activities during the past year, but inasmuch as the expected income will probably fall short of that received last year, we have recommended certain economies and reorganization, which will reduce the budget for the coming year by approximately \$9,000.

These economies, we feel, can be made without the sacrifice of any essential activities.

SALARIES

In view of the fact that very drastic reduction in the salary of the secretary-treasurer was made last year, we recommend that the salary be continued at \$4,000 per year.

For the same reason, we recommend that the salary of the editor of CALIFORNIA AND WESTERN MEDICINE remain at \$4,000 per year.

After careful consideration of the work now under way by the Committee on Public Relations, we recommend that the salary of the director of the Department of Public Relations be continued at \$400 per month.

Inasmuch as material additions are being made to the duties of the office assistants, due to the elimination of two clerical assistants, and in consideration of their long and faithful service, we recommend that their salaries remain as at present.

RENTS

Inasmuch as the lease in the main office rooms, 2004-7, 450 Sutter Street, San Francisco, runs until August, 1934, we are unable to recommend a reduction in rent for those rooms.

We recommend that Room 2039, now occupied by the Cancer Commission and the Department of Public Relations, be abandoned and the work of those departments concentrated in the main office rooms.

TRANSPORTATION EXPENSE

We see no hope of material reduction in transportation expense, except a probable saving of \$400 in the transportation expense of invited guests.

LANE AND BARLOW MEDICAL LIBRARIES

We recommend that the sums allocated heretofore for these libraries be discontinued.

This recommendation is made with regret, but in view of the fact that these libraries are receiving assistance from individuals, county medical societies and hospitals, and that this tax is a double one upon such contributors, and the further fact that drastic economies must be instituted in the financial outgo of the Association, we make this recommendation.

ANNUAL PRIZES

The committee recommends that these be discontinued.

COMMITTEE ON PUBLIC POLICY AND LEGISLATION

Inasmuch as the legislature will not be in session during the coming year, we are recommending no allocation for that purpose, but in the event that need should arise the Council will be free to provide such funds as are needed.

ANNUAL DIRECTORY

We recommend that the directory be abolished provided that the pending amendment to the existing

mandatory clause, which would make this action permissible, be adopted.

PRE-CONVENTION BULLETIN

We recommend that it be printed as a section of the annual program number of CALIFORNIA AND WESTERN MEDICINE.

MAIN OFFICE

A careful survey of the main items of office expense leads us to believe that a saving of about \$500 can be instituted there.

LEGAL DEPARTMENT

We recommend that the retainer for the general counsel of the Association be continued at \$4,000 per year. In addition to the attorney's retainer fee the committee recognizes that necessary and important extra legal expense must be met. This item is at present impossible to budget, and we recommend that it be left to the discretion and judgment of the Council.

COMMITTEE ACTIVITIES

We recommend that there be only three meetings of the Committee on Public Relations during the year. That no bulletins be issued, but instead of bulletins, at specified times letters be sent to the secretaries of each component county unit advising them of the activities of the Public Relations Department and definitely calling their attention to the transactions of the department in CALIFORNIA AND WESTERN MEDICINE. In that way \$450 can be saved. Therefore, the budget should be:

Transportation of committee, three meetings	\$ 450.00	
Director's salary	4,800.00	
Traveling expenses ..	400.00	
Postage	200.00	
Telegraph	25.00	
Supplies	150.00	
Expense	50.00	
Sundry	100.00	
		\$6,175.00
Making a total saving of.....		\$2,919.80

We recommend the expenditure of this sum of money for the reason that, due to the sociologic and economic aspects of the cost of providing adequate medical care to persons of moderate means, it will be necessary that this department be more active than in any other year of its career. You will notice that in the budget for 1933 there has been included no rent or stenographic service. The reason for this is that they occupy office space with the Cancer Commission, and we recommend that those rooms and the services of the stenographers for both the Cancer Commission and the Public Relations Department be discontinued, which will give a saving of \$1,985.16. Therefore the budget for the Cancer Commission should be only that which shall be required for postage and stationery, and both the Cancer Commission and the Department of Public Relations shall avail themselves of the services of the stenographers in the main office. We recommend that the clerk in the main office be replaced by an efficient stenographer who could serve as a stenographer for both the Cancer Commission and the Public Relations Department. In that way a saving could be made of \$2,400.

The allotment for the Cancer Commission would be:

Postage	\$100.00
Office supplies	200.00
Sundry	50.00
Total	\$350.00

The saving for the Cancer Commission would be \$1,822.08.

This makes a total saving for the Department of Public Relations and the Cancer Commission of \$4,741.88.

ANNUAL MEETING EXPENSE

We recommend economy in the annual meeting expense, but as this expense fluctuates we can suggest no budgetary restriction.

CALIFORNIA AND WESTERN MEDICINE

We recommend that the clerical help now employed in this department be continued. It does not seem that the allowance for this purpose is excessive. The present allocation of dues to the JOURNAL account, two dollars per member, is considered a proper amount.

While the future is uncertain, recent trends give ground for the hope that the financial standing of the present advertisers is such that little more shrinkage in advertising is to be expected this year. We do not feel that a reduction in rates is indicated.

We have gone rather fully into the matter of the saving to be effected by mailing without wrappers, by the use of a less expensive paper and particularly by changes in the make-up and size of the JOURNAL.

The savings which would result from doing away with wrappers and from the use of a cheaper grade of paper are so slight that we do not feel the saving would compensate for the possible disadvantages.

While many feel that some of the departments of the JOURNAL might advantageously be deleted, the financial saving would not be very great unless such deletions reach a total of sixteen pages. The printing is done in units of sixteen pages, and the printing cost of any portion of sixteen pages is proportionately much higher. We do not recommend such drastic reduction in size at this time. The amount of space devoted to scientific articles as compared with the other departments is probably not a matter coming within the purview of this committee.

During the past year there has been a reduction in our printing and binding costs of approximately 5 per cent, totaling \$1,200. In view of the present commodity prices, it seems probable that a further reduction might be made without working a hardship on the publishers. We recommend that representations to this effect be made to the Barry Company.

Respectfully submitted,

W. W. ROBLEE, *Chairman*
GEORGE G. REINLE
MORTON R. GIBBONS
CARL R. HOWSON
DEWEY POWELL

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The Speaker stated that Doctor Roblee's report was a supplemental report to the report of the Council and would be presented to the Committee on Reports of Officers and Standing Committees.

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VIII. Resolution on Illness of O. D. Hamlin.—The president spoke with regret of the illness of O. D. Hamlin, chairman of the Council, and presented the following resolution to the House:

Resolved, That the secretary express to Doctor Hamlin in a telegram our deep regret that he is not with us this evening and that he cannot present his report himself, and our hope that he will speedily recover; and that these wishes be accompanied with cigars.

The resolution was seconded by T. Henshaw Kelly of San Francisco and unanimously adopted by the House of Delegates.

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IX. Report of the Auditing Committee.—The Speaker stated that the report of the Auditing Committee had been published in the Pre-Convention Bulletin,¹ and would be referred to the Reference Committee on Reports of Officers and Standing Committees.

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X. Report of the Secretary-Treasurer.—The Speaker stated that the report of the secretary-treasurer had been published in the Pre-Convention Bulletin² and would be referred to the Reference Committee on reports of officers and standing committees.

¹ See Pre-Convention Bulletin, CALIFORNIA AND WESTERN MEDICINE, April, p. 313.

² See Pre-Convention Bulletin, CALIFORNIA AND WESTERN MEDICINE, April, p. 301.

XI. Report of the Editor.—The Speaker stated that the report of the editor as published in the Pre-Convention Bulletin³ contained statistical information on the JOURNAL and that Doctor Kress desired to present a supplemental report. Doctor Kress then read the following report:

To the Speaker and the House of Delegates:

The report of the official journal as printed in the Pre-Convention Bulletin (April CALIFORNIA AND WESTERN MEDICINE, page 304), gave an outline of the number of papers submitted to CALIFORNIA AND WESTERN MEDICINE, and accepted, and either printed or still in the unpublished files. It may not be out of place to make some additional comments concerning the official journal and some of its problems.

The financial report of the official journal for the twelve months ending December 31, 1932 shows that CALIFORNIA AND WESTERN MEDICINE, in common with other medical journals (inclusive of such publications as the *Journal of the American Medical Association*) has suffered a serious diminution in income through loss of a considerable number of well-known advertisers who for years had carried their announcements in the official journal. When the general economic conditions improve, it is hoped that most of such advertisers will again take space in CALIFORNIA AND WESTERN MEDICINE.

At last year's annual session, held in May, 1932, a number of economies were suggested by the House of Delegates Survey Committee, the savings which were instituted amounting to about \$6,000.

In January of this year it was also possible to institute savings with the printer of the official journal, and these will amount to an annual sum of \$1,200. In spite of these reductions in expense, because of the advertising losses referred to, it has not been possible to keep CALIFORNIA AND WESTERN MEDICINE out of the red. The report of the treasurer as printed in the Pre-Convention Bulletin gives further information and details concerning income and expenses.

CALIFORNIA AND WESTERN MEDICINE is the official journal of the organized medical profession of California. It is one of a considerable number of such state medical journals, all of which have as one of their major reasons for existence the advancement of medical science and practice through the printed page. Those of its communications which have to do with medical science may be said to be papers dealing either with research studies or clinical observations. Because the California Medical Association consists almost entirely of practicing physicians, it is understandable why papers dealing with clinical topics constitute the bulk of the scientific articles.

Such manuscripts are usually of considerable length. The major portion are papers read before the scientific sections at the annual meetings of the California Medical Association. A lesser number of such articles are papers which have been read before one of the component county societies. A few papers are also received from the Nevada Medical Association and other sources.

It is unfortunate that the costs of printing make impossible the publication of all the excellent papers which are read at our annual sessions or before our county medical societies. The decision on what papers shall be accepted by the Publication Committee of the official journal has become an increasingly difficult problem, as the State Association, year by year, has grown larger and larger. Fortunately many of the papers read at annual sessions, especially those on more technical subjects, find a ready place in some of the specialty medical journals.

In days gone by, and particularly before the advent of state medical journals, it was customary to print yearly, volumes of annual session transactions. The advantage of presentation of annual session papers in a monthly journal of broader scope, with the additional interest resulting from pertinent discussions by other colleagues, must be apparent to all.

On the other hand, while most of the pages of the official journal are given over to such articles on scientific subjects, it is important that the many other activities of the State Association should be properly emphasized in the official journal. For in the last analysis, the official journal is not only a publication for the presentation of scientific discussions but a journal which acts as a contact medium between the five thousand members of the California Medical Association, whereby all members are made acquainted with the various organization efforts and other work which the Association has brought into being, in order better to safeguard and advance the professional and economic interests of the entire membership.

It is to be expected that in an organization of some five thousand physician members, will be found many physicians who have widely diversified tastes concerning professional reading matter. On that account it is necessary to let the official journal contain departments not only of pure and applied medical science, but others dealing with organization activities that have a close relationship to medical practice. As regards the scientific articles, it is well to remember what a former editor, the late Dr. William E. Musgrave, stated in this connection. He wrote: "It is well for authors to bear in mind, as the editor is required to do, that CALIFORNIA AND WESTERN MEDICINE is a general medical magazine. Probably more than 75 per cent of its physician readers are in general practice, and the other 25 per cent are divided between more than twenty specialties."

The above comments are here submitted to call attention to the fact that the official journal of a state medical society which has some five thousand members necessarily must give its many readers with their diversified tastes somewhat of a choice in the material which each month finds a place on its pages. CALIFORNIA AND WESTERN MEDICINE is not primarily a specialty journal. Rather it is a publication having its largest number of readers among physicians who are general practitioners. It is only proper that these general practitioners, whose money contributions go far in aiding in its support, should have presented to them subject-matter that appeals. And always it must be kept in mind that CALIFORNIA AND WESTERN MEDICINE is fundamentally the official medical journal of a state medical society, and in that capacity must do its utmost, through its pages, to constantly protect and advance the professional and economic interests of the five thousand physicians who, through some thirty-nine component county medical societies, make up the California Medical Association.

Respectfully submitted,

GEORGE H. KRESS, *Editor*.

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The Speaker announced that the report of the editor as published in the Pre-Convention Bulletin and Doctor Kress' supplementary report would be referred to the Reference Committee on Reports of Officers and Standing Committees.

* * *

XII. Report of the General Counsel.—The Speaker stated that the general counsel, Mr. Hartley F. Peart, would present the report of the legal department.

The general counsel reported on the work of his department for the year, with particular reference to the activities of the Committee on Public Relations.

He described conditions pertaining to the operation of county hospitals in various counties, including Kern, San Luis Obispo, Santa Barbara, San Joaquin, Merced, and Fresno counties; the status of a test case brought by a taxpayer in Santa Barbara County; and read excerpts from the complaint filed by twelve doctors in Kern County, and the answer of the Board of Supervisors thereto. He gave a brief summary of the bills pending in the legislature on this subject, reading excerpts from the substitute Assembly Bill 2190, defining indigency and providing for the conduct and operation of county hospitals.

The general counsel reported briefly on the work of the department in connection with proposed plans

³ See Pre-Convention Bulletin, CALIFORNIA AND WESTERN MEDICINE, April, p. 304.

for the rendering of medical and hospital service on a periodic payment basis, and described the various tentative legal forms prepared at the request of the Committee on Public Relations and the Alameda County Medical Association.

He read extracts from his report to the Council on the corporate practice of medicine and the recent decision of the Supreme Court definitely settling and establishing as the law of this state that it is unlawful for a corporation to practice medicine directly or indirectly.

The general counsel closed his report by reviewing other decisions of the courts of importance and interest to the medical profession, including a very recent decision involving the interpretation of x-rays.

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The Speaker stated that the report of the legal department would be referred to the Reference Committee on Reports of Officers and Standing Committees.

* * *

XIII. Report of the Committee on Public Relations. The Speaker stated that the report of the Committee on Public Relations had been published in the Pre-Convention Bulletin⁴ and that Dr. Charles A. Dukes, chairman of the committee, would present further details of the work of the committee and the Department of Public Relations to the House.

Doctor Dukes then gave a résumé of the work of the committee and the department, and explained the development of the Alameda County plan by the committee. Doctor Dukes called attention to the principles for medical service as adopted by the Council, and stated that Alameda, Fresno, San Diego, Whittier, and others were at present working on some plan for the care of the sick.

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At this point, at the request of the Speaker, the Vice-Speaker, John H. Graves, took the chair.

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Doctor Graves, Vice-Speaker, stated that the report of the Committee on Public Relations would be referred to the Reference Committee on Reports of Officers and Standing Committees.

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XIV. Report of the Cancer Commission.—The Vice-speaker stated that the report of the Cancer Commission was published in the Pre-Convention Bulletin⁵ and would be referred to the Reference Committee on Report of Officers and Standing Committees.

* * *

XV. Report of the Committee on Public Policy and Legislation.—The Vice-speaker stated that the report of the Committee on Public Policy and Legislation was published in the Pre-Convention Bulletin⁶ and that an additional verbal report would be given the House by Dr. Junius B. Harris, chairman of the Committee.

Doctor Harris then reported briefly on the several bills of particular interest to the medical profession including the clinic bill, the hospital bill, the bill providing for the care of impounded dogs, and stated that 275 bills were considered by the committee. Doctor Harris explained the necessary procedure in following bills through the legislature and the importance of contacts with committees.

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The Vice-speaker stated that the report of the Committee on Public Policy and Legislation would be re-

⁴ See Pre-Convention Bulletin, CALIFORNIA AND WESTERN MEDICINE, April, p. 312.

⁵ See Pre-Convention Bulletin, CALIFORNIA AND WESTERN MEDICINE, April, p. 313.

⁶ See Pre-Convention Bulletin, CALIFORNIA AND WESTERN MEDICINE, April, p. 311.

ferred to the Reference Committee on Reports of Officers and Standing Committees.

* * *

XVI. Report of the Trustees Of The California Medical Association.—The report of the Trustees Of The California Medical Association as prepared by the president, O. D. Hamlin, was submitted to the House as follows:

To the Speaker and the House of Delegates:

The corporation Trustees Of The California Medical Association was organized under authorization of the House of Delegates at the 1929 annual session. All officers and councilors of the California Medical Association became members of the Trustees.

By authority of resolution of the Council of the California Medical Association \$75,000 of the reserve funds of the Association were transferred to the Trustees Of The California Medical Association, \$48,996.25 of which was invested in United States Government bonds, and the remaining \$26,003.75 was placed in three savings accounts. By accumulation of interest, at the present time the assets amount to \$77,655.26.

Respectfully submitted,

O. D. HAMLIN,

President of Trustees Of The California Medical Association.

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The Vice-speaker stated that the report of the Trustees Of The California Medical Association would be referred to the Reference Committee on Reports of Officers and Standing Committees.

* * *

XVII. Unfinished Business.—The Vice-speaker announced the next order of business to be unfinished business from the last annual session. He stated that the amendments to the constitution had been submitted at the last annual session and published twice in the JOURNAL and were now ready for adoption or rejection.

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(a) *Amendments to the Constitution.*—It was explained that the proposed amendments to Article VII provided for the inclusion of the chairman of the Committee on Public Relations as a member of the Council and Executive Committee.

Amendment to Article VII, Section 1, reading: "The Council shall consist of the councilors, and ex officio the President, the President-Elect, the Speaker of the House of Delegates, and the chairman of the Committee on Public Relations, each with all the rights of a councilor," was presented.

Henry J. Ullmann of Santa Barbara moved that the amendment to Article VII, Section 1, be adopted; such motion was seconded by William H. Kiger of Los Angeles, and unanimously carried.

The Vice-speaker thereupon declared the constitution amended accordingly.

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(b) *Amendment to Article VII, Section 8,* reading: "The Executive Committee shall consist of the President, the President-Elect, the Speaker of the House of Delegates, the chairman of the Council, the chairman of the Auditing Committee, the chairman of the Committee on Public Relations, the Secretary-Treasurer, and the Editor," was presented.

Alfred L. Phillips of Santa Cruz moved that the amendment to Article VII, Section 8, be adopted; such motion was seconded by A. J. Scott of Los Angeles, and unanimously carried.

The Vice-speaker thereupon declared the constitution amended accordingly.

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(c) *Amendment to Article XII, Section 2,* reading: "The Association may publish an annual directory of

members, with such other information as the Council may direct," was presented.

Irving Ingber of San Francisco moved that the amendment to Article XII, Section 2, be adopted; such motion was seconded by A. J. Scott of Los Angeles, and unanimously carried.

The Vice-speaker thereupon declared the constitution amended accordingly.

* * *

XVIII. New Business.—The vice-speaker stated that the next order of business would be the presentation of new business and resolutions.

(a) *Amendments to the By-Laws.*—The general counsel stated that certain amendments to the by-laws were made necessary by the new set-up of the Committee on Public Relations.

The general counsel then presented a proposed amendment to *Chapter V, Section 1*, by the addition of the following to the list of Standing Committees: "(n) *A Committee on Public Relations.*"

(b) Carl Howson of Los Angeles presented the following amendment to *Chapter V, Section 5*, relating to election of chairmen of standing committees, as follows: "*The chairman of each of these committees, except the Committee on Public Relations, shall be nominated and elected annually by the Council, by and with the approval of the House of Delegates. The chairman of the Committee on Public Relations shall be elected by said committee, subject to the approval and confirmation of the Council, and in the event of a failure to elect within sixty days after adjournment of the annual session, the Council shall elect said chairman. Each of these committees shall, each year, except as otherwise provided in these by-laws, at its first meeting or official consultation, during or following the annual session, elect its own secretary.*"

(c) Amendment to *Chapter V* of the by-laws by the addition of a new section to be numbered Section 20 (a) was presented, reading:

"*Section 20(a). Committee on Public Relations.—The Committee on Public Relations shall comprise the chairmen of the following committees, viz.: The Committee on Public Policy and Legislation; the Committee on Medical Economics; the Committee on Hospitals, Dispensaries, and Clinics; the Committee on Health and Public Instruction; the Committee on Membership and Organization; the Committee on Industrial Practice, and the Cancer Commission; and the President, the President-Elect, and the Secretary.*

"*The committee shall be responsible to the Council and to the House of Delegates for all of its activities.*

"*The Council or the Executive Committee may instruct the Committee on Public Relations and outline to it certain policies and duties which shall be executed through the Director of Public Relations. In the event of any disagreement between the committee and the Council or the Executive Committee as to any activity or policy, the decision of the Council, after full discussion and hearing, shall be final.*

"*The committee shall make recommendations to the Council for approval as to the time, the place, the number of meetings, and the budget of the Department, provided that the secretary shall call the first meeting of the committee within sixty (60) days following the annual meeting of the Association.*

"*The Director of Public Relations shall be appointed by the Council (after consultation with the Committee on Public Relations) annually at the organization meeting of the Council. He shall serve at the pleasure of the Council and the committee. He shall act under the supervision and instruction of the chairman of the committee in such matters as shall be approved and sanctioned by the committee, and be responsible to the committee.*

"*The Council shall arrange with the general counsel to give the committee all legal aid.*

"*The committee shall, annually at its first meeting, elect its own chairman. Subject to the approval and confirma-*

tion of the Council, the secretary of the Association shall be ex-officio secretary. A majority of the committee shall constitute a quorum."

(d) Amendment to Chapter V of the by-laws by the addition of a new section to be numbered Section 20 (b) was presented, reading:

"*Section 20 (b). Department of Public Relations.—The Department of Public Relations shall consist of the following component standing and special committees of the Association, viz.: the Committee on Public Policy and Legislation; the Committee on Medical Economics; the Committee on Hospitals, Dispensaries, and Clinics; the Committee on Health and Public Instruction; the Committee on Membership and Organization; the Committee on Industrial Practice, and the Cancer Commission.*"

* * *

The Vice-speaker stated that action to the amendments to the by-laws would be taken on Wednesday evening.

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XIX. Resolutions.—*Resolution No. 1, Report of the Committee on the Costs of Medical Care.*⁷ E. Eric Larson of Los Angeles presented the following resolution:

WHEREAS, The President of the United States has caused the formation of a committee known as the Committee on the Costs of Medical Care, which committee during its five years of existence has compiled and published masses of statistics embracing every phase of the economic structure which may have a bearing on the cost of caring for those of the population affected with medical ills; and,

WHEREAS, This committee, after careful survey and study, has seen fit to make certain recommendations in order to reduce the economic burden as evident in the care of the sick, and to insure the population proper adequate medical care; and

WHEREAS, The committee was unable to agree upon a unanimous report, but has caused to be made two reports known as the majority and minority reports; therefore be it

Resolved, That the House of Delegates of the California Medical Association do hereby unanimously adopt and agree to the principles as set forth in the minority report; and be it further

Resolved, That the Committee on the Costs of Medical Care be commended for its zeal and thoroughness in attacking this stupendous task, and the amassing and compiling of valuable statistics on a phase of the general economic structure of the United States, namely, that of the costs of medical care.

Resolution No. 1, in regard to report of the Committee on the Costs of Medical Care, was referred to the Reference Committee on Resolutions and New and Miscellaneous Business.

* * *

*Resolution No. 2.*⁷ Resolution of Senator Williams on Health Insurance Act.—Edward W. Hayes of Monrovia presented the following resolution:

The following resolution was introduced in the Senate March 28, 1933.

In re: Senate Resolution

INTRODUCED BY SENATOR WILLIAMS

Referred to Committee on

Senate Resolution. Relative to the appointment of a senate committee to investigate and report on a "Health Insurance Act" for the reduction of the high cost of sickness, which reads:

Resolved, By the Senate of the State of California at its fiftieth session commencing on the second day of January, 1933:

That the president of the senate shall at or before the final adjournment of this session appoint a com-

⁷ See second House of Delegates meeting for amended resolutions and action thereon.

mittee of three members of this body to report at the opening of the next regular session of the legislature as to the advisability of a health insurance act and if in the opinion of said committee such an act be advisable to accompany its report by a draft of the bill therefor.

Said committee shall have the power and it shall be its duty to confer and advise with the State Board of Health as to the scope and provisions, and with the attorney general as to the form and constitutionality of such act and the several provisions thereof.

The object of said act shall be, so far as it may be legal and practicable to provide for a reduction of the high cost of sickness by establishing a system of contributions on a working day, *per diem* basis by all employees in all classes of labor receiving average annual earnings of less than \$2,000; contributions to the fund to be not more than ten cents per working day for each person entitled to benefits under said act. Such health insurance plan shall be for medical, surgical and hospital treatment only and shall be available to the dependents of the contributor at the same *per diem* rate of contribution for each dependent named by the contributor. A choice of physicians at rates the fixing of which shall be provided for by said act shall be available to each contributor.

Said health insurance shall not cover any treatment required by state or federal law, or by contract of employment to be furnished by the employer.

Said committee shall also consider and report as to the practicability of contribution by the state to the Health Insurance Fund and the proportion of employees' contributions to be matched by the state.

Said committee shall choose its own officers and meet at such times and places as it may select.

Resolution No. 2, resolution on Health Insurance Act, was referred to the Reference Committee on Resolutions and New and Miscellaneous Business.

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*Resolution No. 3, Annual Dues.*⁷—Harry C. Brown of Los Angeles presented the following resolution:

WHEREAS, Widespread curtailment of individual incomes of members has in general called for retrenchment all along the line; therefore be it

Resolved, That the Los Angeles County Medical Association, delegates and alternates to the 1933 session of the House of Delegates of the California Medical Association, be and are hereby instructed, each and all, to cast their votes in said House of Delegates for the reduction of the assessment for member dues to the California Medical Association, to a sum not to exceed \$8 for the fiscal year, and that it be retroactive to the extent of applying to dues for the year January 1 to December 31, 1933, for members of the California Medical Association.

Resolution No. 3, Annual Dues, was referred to the Reference Committee on Resolutions and New and Miscellaneous Business.

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*Resolution No. 4, Corporate Practice of Medicine.*⁷—Harry H. Wilson of Los Angeles presented the following resolution:

WHEREAS, There has been a decision given in the courts of California, in which the Medical Practice Act of the State of California has been upheld in that it is unlawful for a corporation to practice medicine in the State of California; and,

WHEREAS, This decision was given and became a part of the court records in April, 1930, and has been known as the Blake Decision; and,

WHEREAS, It is common knowledge that there are a number of corporations in the State of California practicing medicine in violation of this decision; and, fur-

ther, there are a number of applications which are being presented to the corporation commissioner for licenses to practice medicine in various guises; therefore be it

Resolved, That the House of Delegates of the California Medical Association does hereby instruct the Council of the California Medical Association to take such action as it may deem proper, through its various standing committees, departments, and legal counsel, in order to follow up and to enforce the interpretation of the Medical Practice Act as interpreted by the Blake Decision.

Resolution No. 4, Corporate Practice of Medicine, was referred to the Reference Committee on Resolutions and New and Miscellaneous Business.

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*Resolution No. 5, X-Ray Fee Schedule.*⁷—Morton R. Gibbons of San Francisco presented the following resolution:

WHEREAS, There has been for some time much dissatisfaction with the x-ray fee schedule used by the Industrial Accident Commission,

For the reason that insurance companies have almost uniformly disregarded said schedule, with the effect that payment for the work has not been uniform, and

WHEREAS, No schedule for x-ray work has ever been adopted by the California Medical Association, and

WHEREAS, The most persistent objection has been that the schedule does not recognize any difference in value of product from different sources, and x-rays from a first-class laboratory, which entailed interpretation of great value, and consultation, are classed with those of technicians and of surgeons who do their own work; therefore be it

Resolved, That the Council and the House of Delegates adopt two schedules which shall recognize a difference in value, and which shall specify the minimum fees for certain procedures.

Resolution No. 5, X-ray Fee Schedule, was referred to the Reference Committee on Resolutions and New and Miscellaneous Business.

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Resolution No. 6, Senate Bill 674. Junius B. Harris of Sacramento, chairman of the Committee on Public Policy and Legislation, asked permission to introduce a resolution on Senate Bill 674 and requested that the rules of the House be suspended to permit action by the members at the present meeting. Doctor Harris stated he had requested Doctor Kress to write such a resolution and would request Doctor Kress to read it.

On motion of T. Henshaw Kelly, seconded by A. J. Scott and unanimously carried, the rules of the House were suspended and the following resolution was presented:

WHEREAS, Senate Bill six seven four, an act to regulate the conduct of pounds and regulating the disposition of animals impounded or sheltered therein is a proposed law which would seriously handicap scientific researches intended to add to the store of human knowledge which makes for the conservation of health and the prolongation of life in human beings; and

WHEREAS, It has been shown that the different universities chartered by the State of California aid the scientific and other investigators who are engaged in studies to promote such humanitarian ends, do not use cruel or vicious methods in their studies; and

WHEREAS, Senate Bill six seven four, in the guise of a supposedly humanitarian endeavor on behalf of lower animals, contains implications that cruel experimentation is carried on in California; and

WHEREAS, Senate Bill six seven four, if it becomes a law, would probably be a forerunner of other proposed statutes that would still further handicap studies and

⁷ See second House of Delegates meeting for amended resolutions and action thereon.

experiments designed to promote health and prolong life in human beings; and

WHEREAS, Senate Bill six seven four, if enacted into law, undoubtedly would do great harm to the best physical and other interests of the citizens of California; now, therefore be it

Resolved, By the California Medical Association in sixty-second annual session now assembled at Del Monte, California, that the members of the California legislature and the Governor of the State of California be petitioned to use their best efforts to prevent Senate Bill six seven four from being enacted into law; and be it further

Resolved, That a copy of this resolution as passed by the House of Delegates of the California Medical Association be sent to the Assembly Committee on Public Health and Quarantine and to all members of the California legislature and to the Governor of the State of California.

T. Henshaw Kelly of San Francisco moved that the foregoing resolution be adopted by the House of Delegates; such motion was seconded by Clarence G. Toland of Los Angeles, and unanimously carried.

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XX. **Reading and Adoption of Minutes.**—The minutes of the meeting were then read, and there being no objection, were approved.

* * *

XXI. **Adjournment.**—There being no further business, the meeting adjourned to meet at 8 p. m., Wednesday, April 26, 1933.

EDWARD M. PALLETTE, *Speaker*.

EMMA W. POPE, *Secretary*.

Second Meeting of the House of Delegates at the Sixty-second Annual Session.

Held in the Bali Room, Hotel Del Monte, Del Monte, California, Monday, April 26, 1933, at 8 p. m.

I. **Call to Order.**—The meeting was called to order by the Speaker of the House, Edward M. Pallette of Los Angeles.

* * *

II. **Roll Call.**—The secretary called the roll; 118 members of the House of Delegates, consisting of officers, delegates and alternates, were seated, and the Speaker declared a quorum present.

* * *

III. **Announcement of Place of 1934 Annual Session.**—At the request of the Speaker, T. Henshaw Kelly of San Francisco announced that the Council had selected Riverside as the place of the next annual session and that the date would be fixed by the Council at a later meeting.

* * *

IV. Election of Officers:

1. **President-Elect.**—The Speaker stated that the next order of business would be the election of officers and that nominations for president-elect were in order.

William Duffield of Los Angeles nominated Clarence G. Toland of Los Angeles as President-elect; such nomination was seconded by J. Homer Woolsey of San Francisco.

A. J. Scott of Los Angeles moved that the nominations be closed and that the secretary be instructed to cast the ballot for Clarence G. Toland; such motion was seconded by Henry J. Ullmann of Santa Barbara and unanimously carried.

The secretary cast the unanimous ballot of the House for Clarence G. Toland, and the Speaker announced the election of Clarence G. Toland as President-elect for the ensuing year.

2. **Speaker of the House of Delegates.**—The president, Joseph M. King of Los Angeles, then took the chair

and announced that the next order of business would be the election of a Speaker for the ensuing year.

F. M. Pottenger of Monrovia nominated Edward M. Pallette of Los Angeles as Speaker of the House; such nomination was seconded by Karl L. Schaupp of San Francisco. Henry J. Ullmann of Santa Barbara moved that the nominations be closed and the secretary be instructed to cast the ballot; such motion was seconded by George G. Hunter of Los Angeles and unanimously carried.

The secretary cast the unanimous ballot of the House for Edward M. Pallette and the president announced the election of Edward M. Pallette as Speaker of the House of Delegates for the ensuing year.

3. **Vice-Speaker of the House of Delegates.**—The president, Joseph M. King, announced that the next order of business was the election of a Vice-speaker.

Ruggles A. Cushman of Talmage nominated John H. Graves of San Francisco as Vice-speaker of the House of Delegates; such nomination was seconded by A. J. Scott of Los Angeles. Eliot Alden of Los Angeles moved that the nominations be closed and the secretary cast the ballot; such motion was seconded by E. Eric Larson of Los Angeles, and unanimously carried.

The secretary cast the ballot and the president announced the election of John H. Graves as Vice-speaker of the House of Delegates for the ensuing year.

4. **Election of Councilors.**—The Speaker stated that the next order of business would be the election of district councilors for the second, fifth and eighth districts.

(a) **Second District.**—The Speaker stated that the next order of business would be the election of a councilor for the Second District.

William R. Molony, Sr., of Los Angeles, nominated Carl L. Howson of Los Angeles; such nomination was seconded by Irving Ingber of San Francisco. William H. Kiger of Los Angeles moved that the nominations be closed and the secretary be instructed to cast the ballot; such motion was seconded by A. J. Scott of Los Angeles, and unanimously carried.

The secretary cast the ballot and the Speaker announced the election of Carl R. Howson as councilor for the Second District for the term of three years.

(b) **Fifth District.**—The Speaker stated that Alfred L. Phillips of Santa Cruz had been nominated as councilor for the Fifth District on written nomination filed with the secretary signed by Doctors L. M. Liles, Santa Cruz; R. A. Kocher, Monterey; H. H. Ray, R. J. Reitzel of San Mateo, and E. P. Cook, C. M. Burchfiel, C. Kelly Canelo and Alson Shufelt of Santa Clara; such nomination was duly seconded. T. Henshaw Kelly of San Francisco moved that the nominations be closed and the secretary be instructed to cast the ballot; such motion was duly seconded and carried.

The secretary cast the unanimous ballot of the House for Alfred L. Phillips and the Speaker announced the election of Alfred L. Phillips as councilor for the fifth district for a term of three years.

(c) **Eighth District.**—The Speaker stated that Charles E. Schoff of Sacramento had been nominated as councilor for the Eighth District on written nomination filed with the secretary signed by Doctors Conrad Briner, Placer; Edward Babcock Jr., Sacramento, and Nathan G. Hale, Sacramento; such nomination was seconded by Robert A. Peers of Colfax. Robert Peers moved that the nominations be closed and the secretary be instructed to cast the ballot; such motion was seconded by Charles T. Sturgeon of Los Angeles and carried.

The secretary cast the unanimous ballot of the house for Doctor Schoff and the Speaker announced the election of Charles E. Schoff as councilor of the Eighth District for the term of three years.

6. *Councilors at Large*.—The Speaker stated that the next order of business was the election of councilors at large to fill the vacancies caused by the expiration of the terms of Harry E. Zaiser of Orange and T. Henshaw Kelly of San Francisco.

(a) John L. Maroon of Orange nominated Harry E. Zaiser of Orange as councilor at large; such nomination was seconded by Ruggles A. Cushman of Talimage.

Lyell C. Kinney of San Diego nominated Chester O. Tanner of San Diego as councilor at large; such nomination was seconded by James F. Churchill of San Diego. Henry J. Ullmann moved that the nominations be closed; such motion was duly seconded and carried.

A vote by ballot was then taken; 52 ballots were cast for Harry E. Zaiser and 61 ballots for Chester O. Tanner. Thereupon the Speaker announced the election of Chester O. Tanner of San Diego as councilor at large for the ensuing three years.

(b) Alson R. Kilgore of San Francisco nominated T. Henshaw Kelly of San Francisco as councilor at large; such nomination was seconded by George G. Hunter. Henry J. Ullmann moved that the nominations be closed and the secretary be instructed to cast the ballot; such motion was duly seconded and unanimously carried.

The secretary cast the unanimous ballot of the House for T. Henshaw Kelly and the chairman announced the election of Doctor Kelly as councilor at large for the ensuing three years.

* * *

V. Election of Delegates and Alternates to the American Medical Association.—The Speaker stated that the next order of business would be the election of delegates and alternates to the American Medical Association House of Delegates. The Speaker stated that there were three vacancies in delegates: one by expiration of term of office, one caused by the resignation of William Duffield of Los Angeles, and one by the death of F. C. E. Mattison of Pasadena; and five vacancies in alternates: one caused by the termination of office, three by the resignations of William H. Gilbert, Los Angeles; Harry H. Wilson, Los Angeles, and Fred B. Clarke, Long Beach, and one by the death of Charles D. Lockwood, Pasadena.

On motion duly made, seconded and unanimously carried, the resignations of Doctors William Duffield, delegate, and William H. Gilbert, Harry H. Wilson and Fred B. Clarke, alternates, were accepted.

1. *Delegates*.—(a) The Speaker stated that nominations were in order for a delegate to the American Medical Association for the sessions of 1934 and 1935 to succeed Dudley Smith of Oakland.

Edward N. Ewer of Oakland nominated Dudley Smith of Oakland as delegate to the American Medical Association for the sessions of 1934 and 1935; such nomination was seconded by William H. Kiger of Los Angeles.

P. K. Gilman of San Francisco nominated Elbridge Best of San Francisco as delegate to the American Medical Association for the sessions of 1934 and 1935; such nomination was duly seconded.

Henry J. Ullmann of Santa Barbara moved that the nominations be closed; such motion was duly seconded and carried.

The Speaker appointed as tellers Doctors John V. Barrow of Los Angeles, G. D. Delprat of San Francisco and Dewey Powell of Stockton.

A vote by ballot was then taken and 49 ballots were cast for Dudley Smith and 60 for Elbridge Best.

The Speaker thereupon declared Elbridge Best of San Francisco elected delegate to the American Medical Association for the sessions of 1934 and 1935.

(b) The Speaker stated that nominations were in order for a delegate to the American Medical Association to succeed William Duffield, resigned, for the session of 1933 to fill the unexpired term and for the sessions of 1934 and 1935.

S. J. McClendon of San Diego nominated Lyell C. Kinney of San Diego as delegate to the American Medical Association for the session of 1933 to fill the unexpired term and for the sessions of 1934 and 1935; such nomination was seconded by J. L. Maroon of Santa Ana. Henry J. Ullmann of Santa Barbara moved that the nominations be closed and the secretary be instructed to cast the ballot; such motion was seconded by William W. Roblee of Riverside and carried.

The secretary cast the ballot of the House for Doctor Kinney and the Speaker announced the election of Lyell C. Kinney as delegate to the American Medical Association for the session of 1933 to fill an unexpired term and for the sessions of 1934 and 1935.

(c) The Speaker stated that nominations were in order for a delegate to the American Medical Association for the 1933 session to fill the unexpired term of F. C. E. Mattison, deceased, and for the sessions of 1934 and 1935.

Egerton L. Crispin of Los Angeles nominated Fred B. Clarke of Long Beach as delegate to the American Medical Association to fill the unexpired term of F. C. E. Mattison, deceased, for the session of 1933 and for the sessions of 1934 and 1935; such nomination was seconded by E. Eric Larson of Los Angeles. William H. Kiger of Los Angeles moved that the nominations be closed and the secretary be instructed to cast the ballot; such motion was seconded by F. M. Pottenger of Monrovia and carried.

The secretary cast the ballot and the Speaker announced the election of Fred B. Clarke as delegate to the American Medical Association for the session of 1933 to fill the unexpired term and for the sessions of 1934 and 1935.

2. *Alternates*.—The Speaker announced that nominations were in order for an alternate to Elbridge Best of San Francisco for the American Medical Association sessions of 1934 and 1935.

(a) Robert Stone of San Francisco was nominated as alternate to Elbridge Best for the American Medical Association sessions of 1934 and 1935; such nomination was seconded by P. K. Gilman. J. Homer Woolsey of San Francisco moved that the nominations be closed and the secretary be instructed to cast the ballot; such motion was duly seconded and carried.

The secretary cast the ballot and the Speaker announced the election of Robert Stone as alternate to Elbridge Best for the American Medical Association sessions of 1934 and 1935.

(b) The Speaker stated that nominations were in order for an alternate to Lyell C. Kinney for the American Medical Association for the session of 1933 to fill an unexpired term, and for the sessions of 1934 and 1935.

E. Eric Larson of Los Angeles nominated Harry H. Wilson of Los Angeles as alternate to Lyell C. Kinney for the session of 1933 to fill an unexpired term and for the sessions of 1934 and 1935; such nomination was seconded by Charles T. Sturgeon of Los Angeles. Henry Snure of Los Angeles moved that the nominations be closed and the secretary be instructed to cast the ballot; such motion was duly seconded and carried.

The secretary cast the ballot and the Speaker announced the election of Harry H. Wilson as alternate to Lyell C. Kinney for the American Medical Association session of 1933 to fill an unexpired term and for the sessions of 1934 and 1935.

(c) The Speaker stated that nominations were in order for an alternate to Fred B. Clarke for the 1933 session of the American Medical Association to fill the unexpired term of Fred B. Clarke, resigned, and for the sessions of 1934 and 1935.

James F. Percy of Los Angeles nominated A. J. Scott of Los Angeles as alternate to Fred B. Clarke for the 1933 session of the American Medical Association to fill an unexpired term and for the sessions of 1934 and 1935; such nomination was seconded by Carl R. Howson. David Thomson of Los Angeles moved that the nominations be closed and the secre-

tary be instructed to cast the ballot; such motion was duly seconded and carried.

The secretary cast the ballot and the Speaker announced the election of A. J. Scott as alternate to Fred B. Clarke for the American Medical Association session of 1933 to fill an unexpired term and for the sessions of 1934 and 1935.

(d) The Speaker stated that nominations were in order for an alternate to Charles A. Dukes to fill the unexpired term of Harry H. Wilson for the American Medical Association sessions of 1933 and 1934.

Irving S. Ingber of San Francisco nominated Edward N. Ewer of Oakland as alternate to C. A. Dukes for the 1933 and 1934 sessions of the American Medical Association to fill the unexpired term of H. H. Wilson, resigned; such nomination was seconded by George G. Reinle of Oakland. T. Henshaw Kelly of San Francisco moved that the nominations be closed and the secretary be instructed to cast the ballot; such motion was seconded by Lyell C. Kinney and carried.

The secretary cast the ballot and the Speaker announced the election of Edward N. Ewer as alternate to Charles A. Dukes for the American Medical Association sessions of 1933 and 1934 to fill an unexpired term.

(e) The Speaker stated that nominations were in order for the election of an alternate to Carl R. Howson for the American Medical Association to fill the unexpired term of Charles D. Lockwood, deceased, for the sessions of 1933 and 1934.

Fred B. Clarke of Long Beach nominated Edward M. Palette of Los Angeles as alternate to Carl R. Howson for the American Medical Association sessions of 1933 and 1934 to fill the unexpired term of C. D. Lockwood; such motion was seconded by Lowell Goin of Los Angeles. T. Henshaw Kelly of San Francisco moved that the nominations be closed and the secretary be instructed to cast the ballot; such motion was seconded by J. L. Maroon of Santa Ana, and carried.

The secretary cast the ballot and announced the election of Edward M. Palette as alternate to Carl R. Howson for the American Medical Association for the sessions of 1933 and 1934.

* * *

VI. Report of the Reference Committee on Reports of Officers and Standing Committees.—At the request of the Speaker, Alson R. Kilgore of San Francisco, chairman of the Committee on Reports of Officers and Standing Committees, presented the report of his committee, which was acted upon section by section. The section on CALIFORNIA AND WESTERN MEDICINE was passed and referred to the Council. The report as submitted read as follows:

To the Speaker and the House of Delegates:

President's Report.—It is a matter for congratulation that our much honored and beloved president has been enabled to withstand as he has the physical strain inevitably inherent in the position of chief executive officer of this Association during a year fraught with exceptional problems and unusual difficulties.

Your committee commends to the House of Delegates and the Council the specific recommendations carried in the president's report regarding the planning of the expenditures of the Association to fit its income; regarding the development of a definite and vigorous attack upon the practice of medicine by corporations; and the maintenance of vigilant attention to the developments in the legislature and its interim committee on health insurance.

Secretary-Treasurer's Report.—The committee finds this report rendered in the excellent manner to which this Association has become accustomed at the hands of its efficient, coöperative and dependable secretary-treasurer. We recommend its adoption.

Report of the Editor.—The editor of CALIFORNIA AND WESTERN MEDICINE is to be congratulated upon the excellent showing made in the maintenance of high

standards with a moderate deficit in an exceptionally difficult year.

Further details of the editor's report will be dealt with in connection with the report of the Council.

Report of the Council.—The committee concurs in the recommendation of the Council that the House of Delegates cancel the charter of the Tuolumne County Medical Society.

The committee concurs in the recommendation of the Council that a charter be granted to Del Norte County.

The committee concurs in the recommendation of the Council that a charter be granted to Kings County.

The committee recommends that Dr. Henry Harris be elected to honorary membership.

We concur in the recommendation of the Council that the clinical prize be awarded to Garnett Cheney of San Francisco, and the research prize to Howard A. Ball of San Diego.

With regard to the identical resolutions submitted by the section on Radiology, Anesthesiology, Pathology, and Bacteriology, your committee recommends their adoption.

Report of Committee on Survey of Expenditures.—The recommendations of this committee entailing a budget reduction of \$9,000 were apparently made on the basis of anticipated reduction of dues from \$10 to \$8, resulting in a reduction of income of approximately \$10,000. It is not our understanding that the committee's recommendations for specific cuts in expenditures were all regarded as desirable, but were determined by the committee as reductions least likely to result in harm to the Association's activities in balancing a budget with income reduced as contemplated. Furthermore, attention is to be directed to the fact that even with these drastic reductions the budget will be but precariously balanced.

This will be accomplished at the expense of material curtailment of important activities, and will provide for no expansion of activities of the Association in behalf of its members in the face of rapidly changing conditions with which this Association should by all means be in a position to deal. Your committee believes that this would be a short-sighted policy and recommends that the dues be maintained at \$10 for the ensuing year.

Salaries.—With respect to specific recommendations, your committee recommends that the salaries of the secretary-treasurer, of the editor, and of the director of Public Relations be not reduced.

Rents.—We feel the concentration of the offices of the director of Public Relations and the secretary-treasurer would act in a mutually detrimental manner and hamper the activities of each to an extent out of proportion to the saving gained. We recommend that this matter be referred to the Council.

Lane and Barlow Medical Libraries.—In view of the importance and necessity of the services to the profession rendered by these libraries, we would deplore the withdrawal of their support by this Association. We recommend that this matter be referred to the Council with recommendation of the House of Delegates that the support be continued as heretofore if this is not impossible.

Annual Prizes.—We concur in the recommendation for the discontinuance of the annual prizes.

Annual Directory.—We concur in the recommendation for discontinuance of the directory.

Pre-Convention Bulletin.—We concur in the recommendation that this be printed as a section in the program number of CALIFORNIA AND WESTERN MEDICINE.

California and Western Medicine.—Your committee believes that there is a general feeling among the membership in favor of some reduction in size of the JOURNAL. We recommend that the House of Delegates instruct the Council to give further consideration to the matter of form and finances of CALIFORNIA AND WESTERN MEDICINE. Since no appreciable financial saving can be accomplished unless a reduction in size of

one complete 16-page folio be accomplished, we suggest that this be done.

With further regard to other recommendations contained in the report of the Committee on Survey of Expenditures, your committee recommends that these be referred to the Council for action in its discretion.

(Specific action on this section was delegated to the Council.)

Trustees.—The Committee acknowledges the report of the Trustees and commends their sagacity and foresight in buying Government bonds, rather than other possible investments.

Legal Department.—The report of the legal department discloses the handling of a very large volume of business for this Association and its members, much of it of personal and confidential character. The committee recognizes that the demands upon the time and energies of the general counsel in connection not only with the usual matters handled by him, but also in connection with work in new fields carried on by the Department of Public Relations, have been great and onerous. The thanks of the Association are due for the work accomplished.

The committee has considered the report of the general counsel on the Corporate Practice of Medicine, prepared at the request of the Council. Inasmuch as matters covered by this report are dealt with in resolution presented on Monday night by Dr. Harry H. Wilson of Los Angeles, further recommendation is not made by this committee.

Committee on Public Relations.—The committee is much impressed with the scope and importance of the work undertaken by the Committee on Public Relations. The committee's plans for continuing and expanding activities include matters of the most vital importance to the membership of this Association. We recommend the adoption of the report and urge that every encouragement and coöperation be given this committee that their services may be continued unhampered.

Auditing Committee.—We recommend the acceptance of the report of the Auditing Committee with expressions of appreciation for the thoroughness with which its work was carried out.

Legislative Committee.—We recognize again the continued obligation of this Association for the untiring efforts of the Legislative Committee and of its chairman. This Association has been fortunate in its affairs at Sacramento, and we cannot urge too strongly upon the membership continued and increasing coöperation.

Respectfully submitted,

Reference Committee on Reports of Officers and Standing Committees,
By ALSON KILGORE, *Chairman*
E. ERIC LARSON,
P. K. GILMAN.

* * *

Alson R. Kilgore then moved for the adoption of the amended report as a whole. Such motion was seconded by T. Henshaw Kelly, and carried.

* * *

VII. Report of the Reference Committee on Resolutions and New and Miscellaneous Business.—William R. Molony, chairman of the Committee on Resolutions and New and Miscellaneous Business then presented the report of his committee, which was acted on section by section.

To the Speaker and the House of Delegates:

Your Reference Committee No. 2 beg leave to submit the following report:

Amendments to the By-Laws.—The committee recommends that the following amendments to the by-laws be adopted:

Amend the by-laws, Chapter V, Section 1 thereof, by adding thereto the following: "(n) *A Committee on Public Relations.*"

Doctor Molony then moved the adoption of the foregoing amendment; such motion was duly seconded, and carried. The Speaker thereupon declared the by-laws amended accordingly.

* * *

Amend Section 5 of Chapter V of the by-laws, to read as follows:

The chairman of each of these committees, except the Committee on Public Relations, shall be nominated and elected annually by the Council, by and with the approval of the House of Delegates. The chairman of the Committee on Public Relations shall be elected by said committee, subject to the approval and confirmation of the Council, and in the event of a failure to elect within sixty days after adjournment of the annual session the Council shall elect said chairman. Each of these committees shall, each year, except as otherwise provided in these by-laws, at its first meeting or official consultation, during or following the annual session, elect its own secretary.

Doctor Molony then moved the adoption of the foregoing amendment; such motion was duly seconded, and carried. The Speaker thereupon declared the by-laws amended accordingly.

* * *

Amend Chapter V, by adding thereto a new section to be known as Section 20 (a), to read as follows:

Section 20 (a). Committee on Public Relations.—*The Committee on Public Relations shall comprise the chairman of the following committees, viz.: The Committee on Public Policy and Legislation; the Committee on Medical Economics; the Committee on Hospitals, Dispensaries, and Clinics; the Committee on Health and Public Instruction; the Committee on Membership and Organization; the Committee on Industrial Practice, and the Cancer Commission; and the President, the President-Elect, and the Secretary.*

The committee shall be responsible to the Council and to the House of Delegates for all of its activities.

The Council or the Executive Committee may instruct the Committee on Public Relations, and outline to it certain policies and duties which shall be executed through the Director of Public Relations. In the event of any disagreement between the committee and the Council or the Executive Committee as to any activity or policy, the decision of the Council, after full discussion and hearing, shall be final.

The committee shall make recommendations to the Council for approval as to the time, the place, the number of meetings and the budget of the Department of Public Relations, provided that the secretary shall call the first meeting of the committee within thirty (30) days following the annual meeting of the Association.

The Director of Public Relations shall be appointed by the Council (after consultation with the Committee on Public Relations) annually at the organization meeting of the Council. He shall serve at the pleasure of the Council and the Committee. He shall act under the supervision and instruction of the chairman of the committee in such matters as shall be approved and sanctioned by the committee, and be responsible to the committee.

The Council shall arrange with the general counsel to give the committee all legal aid.

The committee shall, annually at its first meeting, elect its own chairman, subject to the approval and confirmation of the Council. The secretary of the Association shall be ex-officio secretary. A majority of the committee shall constitute a quorum.

Doctor Molony then moved the adoption of the foregoing amendment; such motion was duly seconded, and carried. The Speaker thereupon declared the by-laws amended accordingly.

* * *

Amend Chapter V of the by-laws by adding thereto a new section to be known as Section 20 (b), reading as follows:

Section 20 (b). Department of Public Relations.—The Department of Public Relations shall consist of the following component standing and special committees of the Association, viz.: The Committee on Public Policy and Legislation; the Committee on Medical Economics; the Committee on Hospitals, Dispensaries, and Clinics; the Committee on Health and Public Instruction; the Committee on Membership and Organization; the Committee on Industrial Practice, and the Cancer Commission.

Doctor Molony then moved the adoption of the foregoing amendment; such motion was duly seconded, and carried. The Speaker thereupon declared the by-laws amended accordingly.

* * *

Resolution No. 1, Committee on the Costs of Medical Care.—William R. Molony presented Resolution No. 1, amended to read as follows:

WHEREAS, A committee was formed, known as the Committee on the Costs of Medical Care, which committee during its five years of existence compiled and published masses of statistics embracing every phase of the economic structure which may have a bearing on the cost of sickness; and

WHEREAS, This committee after careful survey and study has seen fit to make certain recommendations; and

WHEREAS, The committee was unable to agree upon an unanimous report, but has caused to be made two reports known as the Majority and Minority reports; now, therefore be it

Resolved, That the House of Delegates of the California Medical Association does hereby unanimously endorse the principles as set forth in the Minority Report; and be it further

Resolved, That the Committee on the Costs of Medical Care be commended for its zeal and thoroughness in attacking this stupendous task, and in amassing and compiling valuable statistics on a phase of the general economic structure of the United States, namely, that of the costs of illness.

Doctor Molony then moved the adoption of the foregoing resolution, and such motion was duly seconded.

Doctor Rodney Yoell stated that he believed the medical profession should adopt the Minority Report of the Committee on the Costs of Medical Care.

Dr. T. Henshaw Kelly stated that he believed no action should be taken on the adoption of the report. Doctors Karl L. Schaupp and Alson R. Kilgore also expressed the opinion that no action be taken.

It was moved by Alson Kilgore and duly seconded that the motion to adopt the resolution in regard to the report of the Committee on the Costs of Medical Care be tabled.

The Speaker then called for a vote on the motion to table. A vote was taken on the motion to table, and the motion carried. The Speaker announced the motion tabled.

* * *

Resolution No. 2, Health Insurance.—William R. Molony presented resolution No. 2, amended to read as follows:

WHEREAS, The Senate of the Legislature of California has adopted at the present session a resolution introduced by Senator Dan Williams, amended to read as follows:

“Resolved, By the Senate of the State of California at its fiftieth session commencing on the second day of January, 1933, that the president of the Senate shall at or before the final adjournment of this session appoint a committee of three members of this body to report at the opening of the next regular session of the legislature as to the advisability of a health insurance act and if in the opinion of said committee such an act be advisable to accompany its report by a draft of the bill therefor.

“Said committee shall have the power and it shall be its duty to confer and advise with the State Board of Health as to the scope and provisions, and with the

Attorney-General as to the form and constitutionality of such act and the several provisions thereof.

“The object of said act shall be, so far as it may be legal and practicable, to provide for a reduction of the high cost of sickness by establishing a system of contributions on a working day, per diem basis by all employees in all classes of labor receiving average annual earnings of less than \$2,000; contributions to the fund to be not more than ten cents per working day for each person entitled to benefits under said act. Such health insurance plan shall be for medical, surgical and hospital treatment only and shall be available to the dependents of the contributor at the same per diem rate of contribution for each dependent named by the contributor. A choice of physicians at rates the fixing of which shall be provided for by said act, shall be available to each contributor.

“Said health insurance shall not cover any treatment required by state or federal law, or by contract of employment, to be furnished by the employer.

“Said committee shall also consider and report as to the practicability of contribution by the state to the health insurance fund and the proportion of employees' contributions to be matched by the state.

“Said committee shall choose its own officers and meet at such times and places as it may select.”

Now therefore be it

Resolved, That the Council of the California Medical Association be instructed to parallel the work of the Senate committee mentioned in said resolution and report to the House of Delegates at the 1934 annual meeting.

William R. Molony moved that the resolution as amended be adopted. Such motion was seconded by T. Henshaw Kelly, and unanimously carried.

* * *

Resolution No. 3, Annual Assessment.—Dr. William R. Molony submitted the recommendation of the Reference Committee on Resolution No. 3, as follows:

This resolution pertains to the amount of the annual assessment for dues. The committee feels that in view of the report of the Council and the reports of the president and other officers, demonstrating that any reduction of dues would seriously curtail, if not prevent, the continuance and initiation of activities vital to the Association, no reduction in dues should be made and therefore is compelled to recommend that the resolution be not adopted.

Doctor Molony then moved that the resolution be not adopted; such motion was duly seconded. The Speaker then called for a vote on the motion of Doctor Molony that the resolution on reduction of dues be not adopted, and there being no contrary vote, the motion carried and the Speaker stated that the dues would remain at ten dollars per annum.

* * *

Resolution No. 4, Corporate Practice of Medicine.—Doctor Molony then presented Resolution No. 4, corporate practice of medicine, as amended, as follows:

WHEREAS, On the initiation of this Association, a decision known as the Blake Decision was rendered by the Superior Court in and for Los Angeles County, deciding that a corporation cannot lawfully practice medicine; and

WHEREAS, Subsequent decisions by the Supreme and Appellate Courts have definitely announced and established this principle of law in California; and

WHEREAS, It is common knowledge that there are corporations in this state formed and operated for the purpose of practicing medicine, contrary to law; and

WHEREAS, Applications are from time to time being made to the Commissioner of Corporations of California by corporations formed for the purpose of practicing medicine seeking permits to issue and sell their securities; now, therefore, be it

Resolved, That the Council of this Association be instructed to investigate these conditions and to take

such action in reference thereto as it may deem proper and advisable.

William R. Molony moved that the resolution be adopted as amended; such motion was seconded by Henry Snure of Los Angeles and carried.

Resolution No. 5, X-Ray Fee Schedule.—William R. Molony presented Resolution No. 5, amended to read as follows:

WHEREAS, There has been for some time much dissatisfaction with the fee schedule authorized by the Industrial Accident Commission for roentgen examinations, partly because some insurance companies have disregarded said schedules, and

WHEREAS, This schedule does not recognize the difference which exists between the taking of x-ray films, including the making of a proper x-ray examination, interpretation and medical consultation and the mere taking of x-ray by a nonradiologist (frequently a general practitioner but in many instances actually a lay person); therefore be it

Resolved, That for the purpose of insurance and industrial accident practice only, the Council and the House of Delegates of the California Medical Association recognizes this fundamental difference as a fault and that a copy of this resolution be sent to each insurance company writing industrial insurance in the State of California.

William R. Molony moved that the resolution be adopted as amended; such motion was duly seconded and carried.

Respectfully submitted,

Reference Committee on New and Miscellaneous Business,

By WILLIAM R. MOLONY, SR., *Chairman*
LYELL C. KINNEY
IRVING INGBER

William R. Molony then moved the adoption of the report of the Reference Committee as a whole, with the exception of the recommendaiton of the resolution on the costs of medical care; such motion was seconded by T. Henshaw Kelly and carried.

VIII. Standing Committees.—At the request of the Speaker, the secretary read the membership of the standing committees of the Association as recommended by the Council for approval by the House of Delegates, as follows:

<i>Committee on Associated Societies and Technical Groups.</i>			
R. Manning Clarke, chairman.....	Los Angeles	1934	
Clifford Sweet.....	Oakland	1935	
William H. Geistweit.....	San Diego	1936	

<i>Committee on Extension Lectures.</i>			
Robert T. Legge, chairman.....	Berkeley	1934	
James F. Churchill.....	San Diego	1935	
J. Homer Woolsey.....	San Francisco	1936	
Secretary ex officio.			

<i>Committee on Health and Public Instruction.</i>			
Langley Porter.....	San Francisco	1934	
Fred B. Clarke, chairman.....	Long Beach	1935	
W. R. P. Clark.....	San Francisco	1936	

<i>Committee on History and Obituaries.</i>			
George D. Lyman.....	San Francisco	1934	
Charles D. Ball, chairman.....	Santa Ana	1935	
J. Marion Read.....	San Francisco	1936	
Secretary ex officio.			
Editor ex officio.			

<i>Committee on Hospitals, Dispensaries and Clinics.</i>			
Karl Schaupp.....	San Francisco	1934	
John C. Ruddock.....	Los Angeles	1935	
Daniel Crosby, chairman.....	Oakland	1936	

<i>Committee on Industrial Practice.</i>			
Harry E. Zaiser.....	Orange	1934	
Morton R. Gibbons, chairman.....	San Francisco	1935	
Mott H. Arnold.....	San Diego	1936	

<i>Committee on Medical Defense.</i>			
Henry Snure, Sr., chairman.....	Los Angeles	1934	
George G. Reinle.....	Oakland	1935	
Fred R. DeLappe.....	Modesto	1936	

<i>Committee on Medical Economics.</i>			
Willard Stone.....	Pasadena	1934	
John H. Graves, chairman.....	San Francisco	1935	
William R. Molony, Sr.....	Los Angeles	1936	

<i>Committee on Medical Education and Medical Institutions.</i>			
H. A. L. Ryfkogel.....	San Francisco	1934	
George Dock, chairman.....	Pasadena	1935	
George G. Hunter.....	Los Angeles	1936	

<i>Committee on Membership and Organization.</i>			
LeRoy Brooks.....	San Francisco	1934	
Harry H. Wilson, chairman.....	Los Angeles	1935	
Dewey R. Powell.....	Stockton	1936	
Secretary ex officio.			

<i>Committee on Publications.</i>			
Percy T. Magan, chairman.....	Los Angeles	1934	
Ruggles A. Cushman.....	Talmage	1935	
Frederick F. Gundrum.....	Sacramento	1936	
Secretary ex officio.			
Editor ex officio.			

<i>Committee on Scientific Work.</i>			
Lemuel P. Adams.....	Oakland	1934	
J. Homer Woolsey.....	San Francisco	1935	
F. M. Pottenger.....	Monrovia	1936	
Hilmer, O. Koefod, Santa Barbara, secretary of Section on General Medicine, ex officio.			
Edwin M. Taylor, Oakland, secretary of Section on General Surgery, ex officio.			
Emma W. Pope, chairman, ex officio.			

<i>Committee on Public Policy and Legislation.</i>			
E. T. Remmen.....	Glendale	1934	
Junius B. Harris, chairman.....	Sacramento	1935	
Fred R. DeLappe.....	Modesto	1936	
President ex officio.			
President-elect ex officio.			

<i>Special Committee on Clinical and Research Prizes.</i>			
Eugene S. Kilgore.....	San Francisco	1934	
Arthur L. Bloomfield.....	San Francisco	1935	
George Dock, chairman.....	Pasadena	1936	

William R. Molony moved that the membership of the standing committees as read, be approved; such motion was seconded by T. Henshaw Kelly and carried.

* * *

IX. Resolution of Appreciation.—T. Henshaw Kelly of San Francisco presented the following resolution of appreciation:

WHEREAS, The 1933 annual session of the California Medical Association, held at Del Monte Hotel, Del Monte, California, has been outstanding in the history of the Association in the quality of its scientific programs, the arrangements for the comfort of its members and guests and in the opportunities provided for the use of the leisure hours during the session; therefore be it

Resolved, That the House of Delegates extend its thanks to the invited guests of the Association, Doctors Arthur C. Christie, Ray Lyman Wilbur, R. G. Leland, Harvey B. Stone and Cyrus C. Sturgis, for their contributions to the success of the scientific program; to the local Committee on Arrangements, Doctors William Gratiot, Spencer Hoyt, J. A. Merrill of Monterey and Alfred L. Phillips of Santa Cruz, for its thoughtful arrangements for the comfort and pleasure of the members of the Association; and be it further

Resolved, That the Monterey County Medical Society be thanked for its interest and coöperation in the efforts leading to the signal success of the session; and be it further

Resolved, That the Woman's Auxiliary be extended the appreciation and gratitude of the Association for its care and happy custody of the inevitable and beloved accompaniments of every session— the ladies; and be it further

Resolved, That the owners and management of the Del Monte Hotel be thanked for their deep and ever recurrent efforts to make each session held here a better and more successful one; and be it further

Resolved, That the appreciation of the Association be extended to Mr. Hill of Oakland and to Mr. Cochems, executive secretary of the Los Angeles County Medical Association, who have handled the publicity of this session, and to the press of California,

which has accurately and considerably reported activities of the session; and be it further

Resolved, That these resolutions be spread upon the minutes and a copy be sent to those whose successful activities have provoked the resolution.

T. Henshaw Kelly then moved the adoption of the foregoing resolution; such motion was duly seconded and unanimously carried.

* * *

X. Amendments to the Constitution.—The Speaker stated that certain amendments to the constitution were necessary in order to clarify the constitution in relation to the chairman of the Committee on Public Relations. Doctor Palette stated that new business could only be introduced at the second meeting of the House of Delegates with the consent of the House and that amendments to the constitution must lie over for one year before final action is taken so that if permission were granted, the amendments would be merely introduced and action would not be taken until the next session.

With the permission of the House, T. Henshaw Kelly then introduced the following constitutional amendments:

ARTICLE X

Section 1.—Amend Section 1 by inserting therein before the words "an editor" the following: "*the chairman of the Committee on Public Relations.*"

ARTICLE X

Section 4.—Amend the first sentence of Section 4 by striking out the word "and" and inserting after the word "delegates," the following "*and the chairman of the Committee on Public Relations.*"

ARTICLE X

Section 15.—Amend Article X by adding thereto a new section to be numbered 15 and reading as follows: "*Section 15—Election, Term of Office and Powers and Duties of the Chairman of the Committee on Public Relations.*"

"*The election, term of office and the powers and duties of the chairman of the Committee on Public Relations shall be provided in the by-laws.*"

* * *

XI. Resolution of Sympathy.—Joseph M. King of Los Angeles spoke with regret of the illness of Percy T. Phillips and William Ophüls of San Francisco.

On motion of Joseph M. King, seconded by Karl L. Schaupp, the following resolution was adopted:

Resolved, That the House of Delegates of the California Medical Association express to William Ophüls and to Percy T. Phillips and to the families of each, the sincere regret of the Association on their illness.

* * *

XII. Presentation of the President.—At the request of the Speaker, Joseph M. King of Los Angeles presented the incoming president, George G. Reinle of Oakland.

Doctor Reinle expressed his gratitude and sense of responsibility to the Association for the high honor conferred upon him.

* * *

XIII. Presentation of the President-Elect.—The Speaker appointed William H. Kiger of Los Angeles and William Roblee of Riverside to escort the president-elect, Clarence G. Toland of Los Angeles, to the platform.

Doctor Toland then addressed the House and expressed his pleasure at his election as president-elect.

* * *

XIV. Reading and Adoption of Minutes.—On motion of T. Henshaw Kelly of San Francisco, duly seconded and carried, the minutes of the second meeting of the House of Delegates were adopted.

EDWARD M. PALLETTE, *Speaker.*
EMMA W. POPE, *Secretary.*

COMPONENT COUNTY MEDICAL SOCIETIES

CONTRA COSTA COUNTY

The May meeting of the Contra Costa County Medical Society was held on Tuesday, May 9, at 8:40 p. m. at the Hotel Carquinez, Richmond, Dr. L. H. Fraser, presiding. Twenty-five were in attendance.

Dr. Walter Dickie of San Francisco presented an interesting explanation of proposed methods of managing county hospitals, enumerated means of control either as now practiced or as proposed by the various counties at the present, and suggestions for the future improvement of those institutions.

Dr. L. M. Stauffer, vice-president of the society, presided during the reports rendered on the state medical convention held at Del Monte during April. These interesting reports were made by Doctors U. S. Abbott (delegate to the convention), H. G. Ford, S. N. Weil, and L. Abbott Hedges.

Application for membership in the society was made by Dr. Thomas Dozier of Antioch. Upon vote he was accepted into membership.

Announcement was made that the meeting in June will be in the nature of a midsummer outing. Dr. J. B. Spalding moved that the place be Castlewood Country Club. The motion was seconded, and carried.

Before adjourning, Doctor Fraser spoke of the need for an additional physician on the Health Center Board, and admonished the members to bear that in mind at the forthcoming board election.

The society meeting was adjourned at 10:40 o'clock. The auxiliary members joined for refreshments and a very pleasant half-hour, with delightful vocal selections rendered by Mrs. Stauffer of Pittsburg.

CLARA H. SPALDING, *Secretary.*

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HUMBOLDT COUNTY

On January 26 sixteen members of the Humboldt County Medical Society met at Saint Joseph's Hospital. Papers presented were: *Cults and Relation to Medical Profession* by Dr. G. F. Norman; *County Hospital Affairs* by Dr. Lane Falk; and *Costs of Medical Care and Plans* by Dr. O. R. Myers.

On February 16 a joint meeting of pharmacists and doctors of medicine met at Saint Joseph's Hospital. Ritchie Woods, pharmacist, presented a paper on the *Relation of the Druggist to the Physician*; Dr. C. C. Falk, Jr., spoke on *Urological Examinations*; and Dr. John A. Lane on *New Drugs*.

On March 22 a joint meeting of doctors of dentistry and doctors of medicine was held at the Humboldt Golf and Country Club. The scientific meeting followed a golf match which resulted in a tie. A paper was presented by Dr. T. R. Wrigley, dentist, on *Pyorrhea*, and one by Dr. H. G. Gross, physician, on *Head Conditions*.

On April 5 the annual dinner was held at the Humboldt Golf and Country Club. Twenty members attended and two guest speakers from San Francisco County, Dr. William Faulkner, Jr., who spoke on *Chest Injuries*, and Dr. Edwin Bruck on *Serum Treatment of Pneumonia*. Much interesting discussion followed the reading of the above papers.

LAWRENCE A. WING, *Secretary.*

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IMPERIAL COUNTY

At a regular meeting of the Imperial County Medical Society, which was held at the Barbara Worth Hotel, El Centro, April 20, election of officers took place, with W. W. Apple, president, presiding.

The following selections were made: President, John L. Parker of Brawley; vice-president, T. E. Bartholomew of Calexico; secretary-treasurer, George C. Holeran of Brawley.

Following the election a short speech was made by Doctor Apple of El Centro, who had resigned after holding office as president for a period of twelve years.

A short talk was also given by Dr. J. L. Parker of Brawley, promising his utmost coöperation to make

the coming year a lively and entertaining one for the Imperial County Medical Society.

A short business meeting was held to discuss handling of business accounts for members of the society, and a committee was appointed to investigate and report on the subject on some near future date.

A resolution to invite the San Diego County Medical Society to hold a joint meeting with the Imperial County Medical Society at some future date was passed.

Dr. M. C. Canfield of El Centro and Dr. Donald Marcus of Imperial were accepted as new members.

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The Imperial County Medical Society held its regular monthly meeting at the Barbara Worth Hotel, El Centro, on May 16.

After dinner, enjoyed by all present, a short business meeting was held.

Doctor Conover of Brawley was accepted as a new member. He was transferred from Los Angeles County Medical Society.

Committees appointed for the following year are: Program Committee—Doctors Holleran, Davidson, and Conover.

Membership Committee—Doctors Hill, Dutton, and Bartholomew.

Public Relations Committee—Doctors Hodgkins, Webster, and Gregg.

Dr. C. Van Zwahlenburg of Riverside, presented a paper entitled *Mechanics of Acute Appendicitis*, illustrated by lantern slides and motion pictures.

A resolution was passed that the next meeting be held on June 20 at the De Anza Hotel, Calexico.

GEORGE C. HOLLERAN, *Secretary*.

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ORANGE COUNTY

The regular May meeting was held in the chapel of the Orange County Hospital on May 2, with Doctor Wallace presiding.

A letter from Dr. J. F. Plane of Long Beach, chairman of the Emergency Committee, brought a word of thanks in appreciation to the county society for services rendered by members during the emergency following the earthquake.

Doctor Burlew, chairman of the Building Committee, reported that things were at a standstill because of the economic situation.

The Public Relations Committee disapproved of the schedule of standing orders for Metropolitan Life Insurance nurses, as certain phases verge on the practice of medicine.

Dr. J. L. Maroon, delegate to the sixty-second annual session of the California Medical Association at Del Monte, gave a very complete and instructive report of the proceedings.

Dr. D. A. Charnock of Los Angeles spoke on *Cystotomy*. The history of this operation from early times proved very interesting. He stated that cystotomy was practically the only emergency operation in urinary surgery. The excellence of Doctor Charnock's technique was well demonstrated in his sketches and motion pictures.

Doctor Burlew led the discussion which followed, after which the meeting adjourned.

WALDO S. WEHRLY, *Secretary*.

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SACRAMENTO COUNTY

A regular meeting of the Sacramento Society for Medical Improvement was held at the Elks Hall on February 21 at 8:30 p. m.

Doctor Schoff reported an interesting case of syphilis in which a typical chancre containing spirochetes had developed. This patient had acquired syphilis three years previously, had been treated extensively and had a negative Wassermann for at least the past two years—in fact, was under treatment at the time the second true chancre developed.

The papers for the evening were a symposium on the *Development of Cancer Clinics in California*. The

subject was introduced by Dr. Charles A. Dukes, chairman of the California Medical Association Cancer Commission. Doctor Dukes showed pictures and charts of the organization of the Oakland Cancer Clinic.

Dr. Irving S. Ingber represented the Radiology Committee, and gave an interesting talk on the *Results of Treating Cancer with Radium and Roentgen Ray*. His talk was illustrated with lantern slides.

Dr. A. R. Kilgore, representing the Breast Tumors Committee, gave an outline of the work being undertaken by the Cancer Commission of the California Medical Association. An attempt is being made, with success, to arrive at certain standards in diagnosis and treatment of cancer. The following points in standardization were stressed:

1. Any single lump in the breast of a woman of twenty-five or over should be explored.

2. Handle and manipulate during examination as little as possible.

3. Frozen-section facilities must be present in the operating room.

4. Block dissection.

5. Radiation and operation increases the number of five-year cures.

The transfer of Doctor Lawson from the Yolo-Colusa-Glenn County Medical Society to the Sacramento Society for Medical Improvement was read for the first time.

FRANK W. LEE, *Secretary*.

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SANTA BARBARA COUNTY

The regular meeting of the Santa Barbara County Medical Society was held in the Bissell Auditorium on Monday, May 8, at 8 p. m., with President M. J. Geyman presiding.

The speaker of the evening, Dr. William Dock of the Stanford University School of Medicine, gave a most comprehensive and interesting talk on *The Cause of Heart-Sound Changes in Disease*, demonstrating his points with lantern slides.

The paper was discussed, and questions were asked by Doctors Nuzum, Koefod, McNamara and Elliot.

The society then went into executive session.

The application of Dr. A. S. Missell of Santa Maria was read and, upon balloting, he was unanimously elected into the society.

A communication from Doctor Missell, secretary-treasurer of the Santa Maria Academy, was read in which the society was invited to attend a joint meeting with the San Luis Obispo County Society at the Santa Maria Club on May 20.

Doctor Henderson of the Public Relations Committee reported upon the status of the dispensaries at the Cottage and Saint Francis hospitals. This committee, after consideration of the situation, felt that a central dispensary offered the best permanent solution of the out-patient problem. Doctor Henderson explained the formation of such a dispensary, and after further discussion it was moved, seconded and unanimously carried, that the society endorse such a movement.

Doctor Freidell reported for the committee appointed to investigate the Santa Maria Hospital and read a communication from Supervisor Preisker. After discussion by Doctors Brown, Thorner, and Ullmann, it was moved, seconded and unanimously carried, that the report of the committee be adopted and that the committee continue to function until all the recommendations have been carried out.

Doctor Henderson reported that the Woman's Auxiliary of the county medical society were interested in the formation of a scholarship fund for nurses, and suggested that the society formulate some plan whereby this fund might be inaugurated. In that connection Doctor Markthaler reported that Doctor Harris was to be the speaker at the June meeting, and he suggested a joint dinner meeting with the auxiliary at which time additional funds might be collected.

It was moved, seconded and carried, that such a joint meeting be held and that Doctor Markthaler make the necessary arrangements.

WILLIAM H. EATON, *Secretary*.

SAN BERNARDINO COUNTY

The May meeting of the San Bernardino County Medical Society was held at the County Hospital on Tuesday, May 2, at eight o'clock.

There being no business pending the program of the evening was given.

What the General Medical Man Can Do for the Tuberculous Patient was presented by Dr. F. M. Pottenger of Monrovia; *Childhood Tuberculosis* by Dr. E. W. Hayes of Monrovia; and a motion picture on *Types of Different Skin Diseases of Tuberculosis* was shown by Dr. H. C. L. Lindsay of Pasadena.

Discussion of this symposium was scheduled by Doctors D. C. Mock and C. C. Owen. In the absence of Dr. Mock the discussion was opened by Dr. C. C. Owen. Besides the regular program several health charts were shown by Dr. Godfrey.

E. J. EYTINGE, *Secretary*.

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SAN JOAQUIN COUNTY

The stated meeting of the San Joaquin County Medical Society was held Thursday, April 6, in the Medico-Dental clubrooms, 242 North Sutter Street. The meeting was called to order by President Doughty at 8:15 p. m.

A special committee on physiotherapy was appointed, with Doctors Sheldon (chairman), Rohrbacher, and Nelson.

The scientific program was opened by Dr. John H. Shephard of San Jose, who spoke on the subject of *Medical Insurance*. He reviewed the history of medical and hospital insurance and then presented in detail a plan that had been offered recently to the Santa Clara County Society. The following six fundamentals which are essential to the development of any insurance plan Doctor Shephard enumerated as:

1. The beneficiary member must be allowed free choice in the selection of his medical attendant.

2. Every member of the county medical society must be permitted to participate in the plan.

3. The organization must so operate that no influence whatsoever can be brought to bear which in any way might tend to direct a beneficiary member from one doctor to another.

4. Each doctor must receive compensation in proportion to the amount of service he renders.

5. Recognizing that the cross section of the medical profession shows some defects, control of the organization should be vested in an elected board, yet preserving for each physician the right to appeal from the decision of this board to the organization sitting as a committee of the whole.

6. That the medical profession should have full control of its destinies, and the usual custom of doctors being hired to do the bidding of lay minds be reversed so that the doctors become the employer of lay brains working under their direction.

The subject was freely discussed by many of those present, including Doctors Barton Powell, Jr., Powers, Barton Powell, Sr., Dozier, Kaplan, Dameron, Dewey Powell, Chapman, McGurk, Gallegos, Doughty, and Broaddus.

The second paper of the evening was read by Dr. Edward C. Bull of San Francisco on *Practical Points in the Handling of Certain Fractures*. This paper advocated early reduction of all fractures—within two or three hours of accident when possible—in order to get better apposition, to reduce the amount of swelling and injury to the soft parts, and to establish circulation to the injured bones earlier. Especially in fractures of the forearm the swelling within the dense muscle sheaths produces an ischemia of the muscles with resultant atrophies and contractures. These may be relieved by slitting the sheath.

Doctor Bull also discussed the Bayler method of local injection of novocain into the seat of fracture, stating that his experience with this method has been very gratifying to date. Doctor Bull demonstrated with slides a remarkable case of fracture of the odontoid process of the second cervical vertebra, which

he had been able to correct by means of bone grafts between the first and second vertebrae.

C. A. BROADDUS, *Secretary*.

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TULARE COUNTY

The April meeting of the Tulare County Medical Society was held at Motley's Café. In attendance were twenty members and guests.

Doctor Kohn announced the names of the Public Relations Committee, Doctors I. H. Betts (chairman), Austin Miller, and R. C. Hill.

Routine business was dispensed with and the remainder of the evening devoted to the speaker of the evening, Dr. Margaret Schulze.

A very able paper on the *Diagnosis and Treatment of Vaginal Hemorrhages* was presented and thoroughly enjoyed by those present. The meeting was then declared open for discussion.

KARL F. WEISS, *Secretary*.

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VENTURA COUNTY

The April meeting of the Ventura County Medical Society was held at the Ventura Country Club at Saticoy on April 11. A dinner, served to twelve members and six guests, preceded the scientific program.

On account of the late hour the business meeting was omitted.

Dr. W. S. Clark introduced Doctors Thompson and Matthews of Los Angeles as the speakers of the evening. Doctor Thompson gave an interesting paper on *Treatment of Fractures by Wire Traction*, and Doctor Matthews gave a paper on *Gas Bacillus Infection*.

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Fourteen members and four guests attended the May meeting of the Ventura County Medical Society held in the clinic building of the Ventura County Hospital on May 9. Dr. F. Royal Hendricks called the meeting to order at 8 p. m. The scientific program preceded the business meeting.

Doctor Mosher introduced Doctors Piness and Miller of Los Angeles as the speakers of the evening. Doctor Piness gave an interesting talk on *Hay Fever*. Doctor Miller followed with a talk on *Other Allergic Diseases*, which was followed by a short discussion.

Other guests were Doctor Rich of Ventura and Doctor Schlichter of Santa Paula.

Dr. W. S. Clark gave a report of the business transacted at the meeting of the California State Medical Association at Del Monte.

Dr. Charles Smolt made a motion that the delegate to the state meeting be reimbursed \$40 to help defray his expense at Del Monte. Doctor Jones seconded the motion; the motion was voted, and carried.

Doctor Achenbach was appointed program chairman for the June meeting, and Dr. Charles Smolt was appointed program chairman for the July meeting.

WILLIAM FELBERBAUM, *Secretary*.

CHANGES IN MEMBERSHIP

New Members (32)

Alameda County.—Charles C. Stevenson.

Contra Costa County.—William A. Powell, Thomas Jefferson Dozier.

Fresno County.—Edward Irving Levy, G. K. Nider, John T. Perry.

Los Angeles County.

Clyde F. Baccus
William Ellery Bailey
Max William Bay
Clarence J. Berne
Leonard Everett Croft
Edgar R. Earwood
Keith Curtiss Flower
Vincent Patrick Flynn

Ward Hannah
C. J. Hershey
Robert W. Johnson
Oliver K. Malcolmson
Paul R. McGill
R. W. Stellar
David N. Treweek
Robert A. Walker

Monterey County.—Lawrence Carl Johnson, Edwin F. Kehr.

Sacramento County.—Samuel Richard Arthur.

San Bernardino County.—Martha Canfield, Rutherford O. Ingham.

San Francisco County.—Muriel E. Edwards, James B. McNaught, Paul Edward Hoffmann, David Alvra Wood, Walter Lawrence.

Transferred (5)

Ethel M. Brownsberger, from Los Angeles to North Carolina County.

Guy De N. Conover, from Los Angeles to Imperial County.

William R. Harder, from Lassen-Plumas to Santa Clara County.

Donald McNeil, from Yolo to Sacramento County.

Rodney F. Wood, from San Diego to Riverside County.

Resigned (11)

Edna L. Barney, from San Francisco County.

Thomas R. Barney, from San Francisco County.

K. I. Berejkoff, from San Francisco County.

Joseph L. Choate, from Los Angeles County.

John H. Dorn, from San Francisco County.

E. O. Jellinek, from San Francisco County.

Frank R. Morgan, from Los Angeles County.

Albert A. Peterson, from Los Angeles County.

Harry J. Powers, from Los Angeles County.

Elizabeth A. Sirmay, from Los Angeles County.

A. G. Sweet, from Los Angeles County.

In Memoriam

Hartman, William Walter. Died in Los Angeles, April 25, 1933, age 32 years. Graduate of Rush Medical College, Chicago, 1923. Licensed in California, 1928. Doctor Hartman was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.



Kergan, Henry Sidney. Died in Oakland, May 10, 1933, age 62 years. Graduate of Michigan College of Medicine and Surgery, Detroit, 1894. Licensed in California, 1896. Doctor Kergan was a member of the Alameda County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.



MacDonald, Harley Edgar. Died in Redding, April 20, 1933, age 55 years. Graduate of Ohio Medical University, Columbus, 1906. Licensed in California, 1913. Doctor MacDonald was a member of the Shasta County Medical Society, the California Medical Association, and the American Medical Association.



Ophüls, William. Died in San Francisco, April 27, 1933, age 62 years. Graduate of University of Goettingen, Germany, 1895. Licensed in California, 1899. Doctor Ophüls was a member of the San Francisco County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

OBITUARIES

Francis Xavier Voisard 1869-1932

Francis Xavier Voisard was born at Louiseville, province of Quebec, November 13, 1869. He received his medical education at the University of Victoria, Montreal, graduating in 1891. He removed to Woodland, California, in 1892, where he became associated with Doctor Kier, long a prominent physician in that locality. After three years at Woodland, Doctor Voisard went to the French Hospital, San Francisco, as resident. Subsequent to this hospital experience, he engaged himself as a ship surgeon for six years with the Pacific Mail, under whose flag he traveled widely, thrice encircling the globe. At the end of this service at sea he accepted a position with the govern-

ment in the Panama Canal Zone. Thereafter he did postgraduate work at Columbia and in Paris, where he took up the specialty of urology.

He returned to Sacramento about 1913, where he has since practiced his specialty with honor and success. His death removes from our midst a congenial confrère who will be greatly missed.

F. F. GUNDERSON, M. D.

L. J. GOUGUET, M. D.



William Ophüls 1871-1933

Dr. William Ophüls, pathologist, died on April 27, 1933, after a lingering illness.

His loss is mourned not only by his associates and students in Stanford University Medical School, of which he was pathologist, teacher, dean, but by the medical profession of the entire Pacific Coast. His was here the last word on pathologic problems and histologic diagnosis.

Born in Brooklyn, New York, October 23, 1871, eldest son of Carl and Clara Ophüls (née Wilhelms), was taken to Germany in early childhood where he attended high school (Gymnasium) in Crefeld, and attended the University of Würzburg from 1890 to 1893, where he was a member of the student corps, Rhenania. The year 1894 he spent in the University of Berlin and in 1895 received the degree of doctor of medicine in Goettingen. For two years, 1896 and 1897, he was assistant in the pathologic institute of the University of Goettingen under Prof. Johannes Orth. On coming to America he was almost immediately appointed professor of pathology and bacteriology in the University of Missouri at Columbia, where he spent one year, parts of 1897 and 1898, when on the recommendation of Dr. William H. Welch of Johns Hopkins he was called to the chair of pathology in Cooper Medical College in San Francisco, which position he held until 1912, when Cooper College graduated its last class. In 1909, when Stanford University organized its medical department, Doctor Ophüls was appointed professor of pathology. He served as secretary of the faculty for a time until 1916, when Dr. Ray Lyman Wilbur, dean, was made president of the university, and Doctor Ophüls succeeded him in the office of dean, which position, as well as that of professor of pathology, he filled till obliged by illness to cease active work, this at the end of 1932.

He occupied a number of other important positions, *e. g.*, was president of the San Francisco Board of Health, 1906 to 1909, and was a fellow of the Rockefeller Institute, 1905 to 1908. He was a member of a number of important societies, such as the American Association of Pathologists and Bacteriologists, the American Medical Association, California State Medical Association, California Academy of Medicine, and Society for Experimental Biology and Medicine. He was a member of the University Club of San Francisco.

He married Emmy Feldman of New York, May 6, 1903, by whom he had four children—Clara, Ernst, Elinor (now Mrs. W. C. Deamer) and Gertrude, who, with Mrs. Ophüls, survive him.

Doctor Ophüls published contributions to medical science were not as numerous (some fifty-six titles) as they would have been had his time not been taken up so fully with teaching, laboratory analysis, and administrative work in the public service and in the office of dean. Still he made notable contributions in tuberculosis, amyloid substance, coccidioid granuloma (it was he who established the fact that the organism is a mold) tuberculosis and pseudotuberculosis, inflammation in kidneys and liver, arteriosclerosis, and other subjects. He published also a critical analysis of the findings in three thousand autopsies, and during his progressive illness was engaged in completing the manuscript of a textbook of pathology, which it is hoped will be published posthumously.

In the death of William Ophüls, Stanford Medical School has lost a great teacher, the medical profession a clear-headed leader in better medical thought, and the scientific world a capable investigator exceptionally well equipped for original work.

EMMET RIXFORD.

THE WOMAN'S AUXILIARY TO THE CALIFORNIA MEDICAL ASSOCIATION*

Officers and State Board of the Woman's Auxiliary to the California Medical Association for the Fiscal Year 1933-1934

President.....	Mrs. Andrew Mitchell Henderson 1600 M Street, Sacramento
President-Elect.....	Mrs. Philip Schuyler Doane 855 Oak Knoll Circle, Pasadena
First Vice-President.....	Mrs. Paul A. Quaintance 809 South Orange, Los Angeles
Second Vice-President.....	Mrs. Thomas Clark 40 Ross Circle, Oakland
Recording Secretary.....	Mrs. Ruggles A. Cushman Talmage
Corresponding Secretary.....	Mrs. Charles E. Von Geldern 1325 Fortieth Street, Sacramento
Treasurer.....	Mrs. Frederick N. Scatena 1400 Forty-first Street, Sacramento

Councilors-at-Large

Mrs. H. S. Farris, 4425 Fourth Street, Riverside.
Mrs. Percy B. Gallegos, 1759 North San Joaquin Street, Stockton.
Mrs. Charles E. Howard, 4233 Arguello, San Diego.
Mrs. R. A. Peers, Colfax.

District Councilors

First District:	Mrs. E. A. Blondin, 1202 Golden Gate, San Diego.
Second District:	Mrs. Clifford Wright, 454 South Irving Boulevard, Los Angeles.
Third District:	Mrs. Rodney Atsatt, 2024 Grand Avenue, Santa Barbara.
Fourth District:	Mrs. Jesse W. Barnes, 1636 North Hunter, Stockton.
Seventh District:	Mrs. U. S. Abbott, 5490 Barrett Avenue, Richmond.
Eighth District:	Mrs. J. Howard Hall, 2675 Donner Way, Sacramento.
Ninth District:	Mrs. Raymond Babcock, Willits.

Chairmen of Standing Committees

Membership and Organization:	Mrs. Paul A. Quaintance, 809 South Orange, Los Angeles.
Program:	Mrs. Thomas Clark, 40 Ross Circle, Oakland.
Hospitality and Convention:	Mrs. H. S. Farris, 4425 Fourth Street, Riverside.
Publicity and Publications:	Mrs. Clifford Wright, 454 South Irving Boulevard, Los Angeles.
Associated Organizations and Social Welfare:	Mrs. Percy B. Gallegos, 1759 North San Joaquin Street, Stockton.
Public Health Activities:	Mrs. Rodney Atsatt, 2024 Grand Avenue, Santa Barbara.

Chairmen of Special Committees

Public Relations:	Mrs. J. Howard Hall, 2675 Donner Way, Sacramento.
Distribution of Hygeia:	Mrs. Clifford Wright, 454 South Irving Boulevard, Los Angeles.
Revisions:	Mrs. Philip Schuyler Doane, 855 Oak Knoll Circle, Pasadena.

Component County Auxiliaries

Los Angeles.—The Woman's Auxiliary to the Los Angeles County Medical Association assembled on the May 16 in the Ebell Club Solarium, Los Angeles.

Mrs. A. Bennett Cooke, president, opened the meeting by introducing Dr. Clarence Toland, state president-elect of the California Medical Association, man of learning and surgeon of wide repute. "There is something besides practice in the field of medicine," he asserted, something besides mere professionalism in every profession. The man in the White House proves it daily—shows what one man and his family can do to make the world better and happier."

Miss Eloise A. Hafford, former superintendent of the School for Delinquent Girls, New York, followed Doctor Toland with an interesting discussion of The

* As county auxiliaries to the Woman's Auxiliary to the California Medical Association are formed, the names of their officers should be forwarded to Mrs. Clifford A. Wright, chairman of the Publicity and Publications Committee, 454 South Irving Boulevard, Los Angeles. Brief reports of county auxiliary meetings will be welcomed by Mrs. Wright and must be sent to her before publication takes place in this column. For lists of state and county officers, see advertising page 6. The Council of the California Medical Association has instructed the editor to allocate one page in every issue for Woman's Auxiliary notes.

Responsibility of the Community to the Adolescent Child. The community, she reminded us, includes us all. And in this most urgent responsibility we all share and share alike. Broken homes, broken parents, broken children—a trio of tragedies laid at our doors that may not and should not be evaded.

Following Miss Hafford's discussion, Mrs. Cooke presented Mrs. Philip Schuyler Doane, state president-elect and former president of the Los Angeles County Woman's Auxiliary. Mrs. Doane, in her informative manner, took us for a joyous excursion through the most recent adventures of our organization—the three days' medical sojourn at Del Monte. She paid a special tribute to Mrs. Frank E. Coulter, former state president; gave a glowing account of the musicale at Carmel in honor of Mrs. James F. Percy, national president; and illuminated the workings of the complicated machinery of medical progress, as exemplified in the Del Monte meeting.

The address of Dr. Joseph King drew deserved eulogy, and that of Dr. George G. Hunter, who unraveled the skein of tangled medico-legal legislation called Bill 935, and translated it into terms of average woman understanding.

Mrs. Doane's address was tintured with instructive wit and humor. Humor, as everyone knows, is the basis of serious, progressive thinking. "More taffy and less epitaphy," as Mrs. Doane suggests. None of the mournful mindedness that anchors the fossil in its permanent niche.

The program concluded with interesting current events by Mrs. W. O. Leach.

1 1 1

Riverside County.—Members of the Woman's Auxiliary to the Riverside County Medical Association met at the home of Mrs. N. K. Bear for their monthly meeting. Mrs. A. W. Walker, president, presided.

Mrs. Harvey S. Faris, delegate to the recent state convention, reported on the Del Monte meeting, and stated that the 1934 convention will be held in Riverside.

Committees working on plans for the observance of National Hospital Day on Friday at the Community Hospital reported plans nearly completed.

Mrs. Clark of Hemet read an interesting paper on *Education of a Doctor's Wife*. Mrs. C. Van Zwahlenburg led in discussion of the same subject.

1 1 1

San Diego.—Regular routine business was followed by reports of convention delegates, who brought back various ideas as to the service projects carried on by the auxiliaries throughout the state, as well as reports of speeches and other highlights of the sessions.

The auxiliary decided to hold a benefit bridge party in June in addition to the regular meeting, the proceeds to be used for a local fund for the treatment of infantile paralysis. One of the members generously offered the use of a hall she owned. The Social Committee will be in charge of arrangements.

Dr. S. A. Parowski, head of Vau Clain Tuberculosis Home in San Diego, gave one of the most interesting talks of the year. His subject was *Newer Treatments of Tuberculosis*, covering in a comprehensive and instructive manner developments along this line. He showed numerous roentgen-ray films of cases before and after treatment at the home. He also gave opportunity to inspect tubercle bacilli under the microscope. One of the members gave humorous and enlightening current events.

1 1 1

San Luis Obispo.—A special meeting on March 29 for the purpose of having Dr. Allen F. Gillihan, member of the county board of the White House Conference on Child Welfare, instruct the members regarding the White House Conference was held at the home of Mrs. Bateman. Five members were present. Doctor Crew, president, presided.

The secretary reported and presented a letter from the San Luis Obispo County Medical Society appointing the following doctors as advisory board to the

Woman's Auxiliary: Doctors Butler, Gillihan, Bartle, and Marshall. Doctor Gillihan explained the purpose and ideals of the White House Conference. He said the work is still in the process of organization, and that it will take some time to put over such a gigantic undertaking. Doctor Gillihan was instructed to convey a message to the county committee of the White House Conference that the auxiliary stands ready to coöperate with them and aid them in any way possible in putting over this project.

News Items

Annual Meeting.—Delegates and members began arriving on Sunday at Del Monte, greeting old friends, meeting new ones. Maybe the men knew each other before auxiliary days, but many of the women knew very few people. The auxiliary was bearing fruit, and the feeling of home and welcome was everywhere. The convention chairman, Mrs. William H. Sargent, assisted by Mrs. Thomas Clark, had made arrangements long before for the comfort and entertainment of the auxiliary.

Mrs. Frank E. Coulter, state president, was asked to preside at the Cancer Commission meeting on Sunday night, and did so with honor to herself and the organization.

Board meetings and auxiliary meetings were interspersed with luncheons, receptions, golf, garden tours, studio tours, and even bicycle tours. There was not a quiet moment—nobody wanted one.

A musicale and reception was given on Monday evening to compliment Mrs. James F. Percy, national president of the auxiliary, and Mesdames Cyrus Sturges, A. C. Christie, R. G. Leland, and H. B. Stone, wives of the guest speakers. Mrs. Frank E. Coulter, president of the State Auxiliary, assisted by members of the state board, received the guests. Eva Gruninger, with her superb contralto voice, accompanied by Elizabeth Alexander, gave us an evening of rare enjoyment.

Mrs. Coulter, state president, was the guest of honor at the luncheon on Tuesday, at which Mrs. James F. Percy presided. Doctors Joseph King, George Hunter, and R. Manning Clarke were guest speakers. Doctor King expressed great appreciation of the auxiliary. Doctors King and Hunter discussed legislative measures. The theme of Doctor Clarke's message was service.

The closing event was the luncheon at Pebble Beach Lodge in honor of the new president, Mrs. A. M. Henderson. Pebble Beach is a place of rare beauty, and the occasion was one long to be remembered. It was at this time that Mrs. Coulter in her efficient, sweet way turned the leadership of the auxiliary over to Mrs. Henderson. Mrs. Henderson has many old friends in the auxiliary, having been one of the pioneer workers in Sacramento. Her gracious manner and known ability will undoubtedly assure a successful year. Mrs. James Percy was a leading light on every occasion. Always interested, always helpful, she gives generously of her time and talents.

An accident early in the year has prevented Mrs. George Hunter from being as active as is her custom. It gave her friends great pleasure to see her at the convention. Dr. William Duffield's presence in Del Monte was the occasion of great rejoicing in auxiliary circles.

Among the women active in making the convention a success were: Mrs. William H. Sargent, general chairman of arrangements, assisted by Mesdames Thomas Clark, Arthur Arehart, Spencer Hoyt, A. A. Alexander, Robert Glenn, Hiram Curry, A. A. Bird, Harold Trimble, Frank Bowles, D. Jefferies, Louie Dyke, Alvin Powell, Claire Razor, Robert Southerland, Wilson Davidson, W. M. Gratiot, W. W. Crane, Frank Baxter, C. A. Dukes, E. N. Ewer, Charles Rowe, Albert Rowe, and George Reinle.

Dr. and Mrs. James F. Percy left on May 8 for an automobile trip to Milwaukee for the American Medical Association meeting in June. En route Mrs. Percy will attend several state meetings. Doctor Percy is on the program for the Oklahoma state meeting.

NEVADA STATE MEDICAL ASSOCIATION

O. HOVENDEN, McGill	President
D. A. SMITH, Mina	President-Elect
J. N. VAN METER, Las Vegas	First Vice-President
FLEET H. HARRISON, Minden	Second Vice-President
HORACE J. BROWN	Secretary

COMPONENT COUNTY MEDICAL SOCIETIES

CLARK COUNTY

The Clark County Medical Society met on Saturday, May 13. Doctor Balcom of Las Vegas presented the following program.

Roentgen Diagnosis of Lesion of the Small Intestine—Dr. Kenneth Davis of Los Angeles.

Nontubercular Diseases of the Chest—Dr. Dwight Davis of Los Angeles.

A resolution of condolence was addressed to Dr. H. C. Vander Meulen, whose wife died on April 30, following a long illness.

The society will meet on Sunday, May 21, to greet Dr. Horace J. Brown of Reno.

J. N. VAN METER, *Secretary*.

Study of Various Pregnancy Tests.—According to Wilson and Blanchet, the diagnosis of pregnancy either early or late is at times difficult. Uterography, while potentially dangerous, is valuable, when carefully done, as a diagnostic medium in early pregnancy. The x-rays, though subject to technical difficulties, are of immense value as an adjunct in the diagnosis of pregnancy. The biologic tests yield the more certain results and are devoid of danger to both mother and child. The Friedman or Schneider modification of the Ascheim-Zondek test is to be preferred to all other modifications because of its accuracy and availability of the animals used, since rabbits are easily procured and it is not necessary to determine rigorously their weight. Moreover, it is not necessary to kill the animal, and the same animal may be used in other experiments. The reaction is macroscopic and the response is rapid, requiring only from fifteen to forty-eight hours. A negative observation does not preclude the possibility of pregnancy; repeated negative observations are reliable. The authors conclude that since all methods known up to the present time for the diagnosis of early pregnancy are uncertain and unreliable, the obstetrician is justified in exhausting various laboratory tests for aid. According to their reliability and danger to the fetus and mother, the value of the tests is in the following order: biologic tests, x-rays, iodized poppy-seed oil. The Ascheim-Zondek is accepted as the most reliable of the biologic tests, and most observers agree that its results are accurate.—*Illinois Medical Journal*.

Even in the populous districts, the practice of medicine is a lonely road which winds uphill all the way, and a man may easily go astray and never reach the delectable mountains unless he early finds those shepherd guides of whom Bunyan tells, Knowledge, Experience, Watchful and Sincere.—Osler.

One by one many municipalities are accepting the fact that sewerage and sewage treatment make up a utility whose service should be paid for on a service basis, which means their elimination as a charge against taxation.—*Ohio Health News*.

The January *National Geographic* prints an interesting article on jays, with illustrations in color of eleven species, but omits all reference to the type which crosses the street without watching traffic and thereby figures heavily in the automobile fatality record.—*Ohio Health News*.

MISCELLANY

Under this department are ordinarily grouped: News; Medical Economics; Correspondence; Twenty-five Years Ago column; Department of Public Health; California Board of Medical Examiners; and other columns as occasion may warrant. Items for the News column must be furnished by the fifteenth of the preceding month. For Book Reviews, see index on the front cover, under Miscellany.

NEWS

Coming Meetings.

American Medical Association, Milwaukee, Wisconsin, June 12 to 16, Olin West, M. D., 535 North Dearborn Street, Chicago, Secretary.

California Medical Association, Riverside, California, spring of 1934. (Date to be announced later.)

Pacific Coast Oto-Ophthalmological Society, San Francisco, June 28 to 30, Frederick C. Cordes, 384 Post Street, San Francisco, Secretary.

Western Branch of the American Urological Association, Vancouver, B. C., August 3 to 5, George W. Hartman, M. D., Secretary.

Medical Broadcasts.*

American Medical Association Health Talks.—The American Medical Association broadcasts on Monday and Wednesday from 9:45 to 9:50 a. m. (central standard time) over station WBBM (770 kilocycles, or 389.4 meters).

There is also a fifteen-minute talk, sponsored by the association, on Saturday morning from 9:45 to 10 over station WBBM.

San Francisco County Medical Society.—The San Francisco County Medical Society broadcasts every Tuesday from station KFRC, 4 to 4:15 p. m., and over station KJBS from 11:15 to 11:30 a. m.

Los Angeles County Medical Association.—The radio broadcast program for the month of June is as follows:

Tuesday, June 6—KFI, 10:15 to 10:30 a. m., and KECA, 9:45 to 10 a. m. Subject: The Superior Child.

Tuesday, June 13—KFI, 10:15 to 10:30 a. m., and KECA, 9:45 to 10 a. m. Subject: The Alibi of Fat.

Tuesday, June 20—KFI, 10:15 to 10:30 a. m., and KECA, 9:45 to 10 a. m. Subject: Exercise for the Middle-Aged.

Tuesday, June 27—KFI, 10:15 to 10:30 a. m., and KECA, 9:45 to 10 a. m. Subject: Why Do You Worry?

Doctor Chandler Named Dean.—Dr. Loren R. Chandler, assistant clinical professor of surgery at the Stanford University Medical School, has been named dean of the school by the university board of trustees, meeting in regular session.

Doctor Chandler succeeds Dr. Henry G. Mehrtens, acting dean, who died last February. Doctor Mehrtens replaced the late Dean William Ophüls.

It is believed that Doctor Chandler will be one of the youngest, if not the youngest, medical deans in the country. His appointment means that the medical school will be tied in closer with the Stanford medical alumni.

Doctor Chandler was graduated from Stanford University in 1920.—*News Item.*

"The Hebrew Physician."—The third issue of *The Hebrew Physician* (Harofeh Hoibri), the only Hebrew medical journal published outside of Palestine, edited by Dr. Moses Einhorn, has just made its appearance.

All physicians who are interested in this journal are requested to communicate with The Hebrew Physician, 983 Park Avenue, New York City.

* County societies giving medical broadcasts are requested to send information as soon as arranged (giving station, day, date and hour, and subject) to CALIFORNIA AND WESTERN MEDICINE, 450 Sutter Street, San Francisco, for inclusion in this column.

The 1933 Graduate Fortnight of the New York Academy of Medicine.—Metabolic Disorders will be the theme of the 1933 Graduate Fortnight of the New York Academy of Medicine. Two weeks of intensive study, from October 23 to November 3 inclusive, will be devoted to this important branch of medical science. A complete program and registration blank may be secured by addressing Dr. Frederick P. Reynolds, The New York Academy of Medicine, 2 East 103rd Street, New York City.

Guest Physicians Visit University of California School.—As a part of the general background training of future physicians of the state the University of California Medical School recently held four lectures by visiting medical scientists of note.

The visitors were: Dr. George W. Crile, head of the Cleveland Clinic, Cleveland, Ohio; Dr. J. C. Drummond, professor of biochemistry at University College, University of London; Dr. William H. Park, director of the laboratories of the New York Department of Public Health; and Colonel William R. Dear of the Army Medical Corps.

Doctor Drummond spoke on the general subject of vitamins and the clinical features of diseases caused by a lack of these essential food factors. Colonel Dear spoke on his experiences as senior medical officer with the American Russian Relief Mission.

Viosterol Overdoses Declared Dangerous.—Caution against too large doses of viosterol, artificial vitamin D, which is widely used as a preventive of rickets in babies, was urged by Dr. Agnes Fay Morgan of the University of California, before the meeting of the Federation of American Societies for Experimental Biology at Cincinnati on May 3.

Doctor Morgan and associates reported a new method of studying bones to find out how they were affected by vitamin D. Doctor Morgan's studies with rats have convinced her that the largest safe dose of viosterol is very much less than previously supposed.

Overdoses of this substance seem to produce kidney injury, which Doctor Morgan believes is the cause of death of animals receiving too much viosterol. She emphasized that it is unwise and unsafe for mothers to buy this potent substance and give it to their children without a physician's directions as to the amount of the dose.

Western Branch Society of the American Urological Association.—The Western Branch Society of the American Urological Association will hold its next annual meeting at Vancouver, B. C., on August 3, 4, and 5, 1933. A splendid program is under preparation, one of the important items being a symposium on the newest and one of the oldest subjects in urology, prostatic resection. One of the authors has traced the history of this subject for over one hundred years and will present a moving picture. Many other important subjects of interest to the general practitioner as well as the urologist will be discussed. The railroads will have special rates. Golf and other entertainment will be available. All members of the medical profession are invited to the scientific sessions.

Physicians contemplating attendance can get fuller details and make reservations with the secretary, Dr. George W. Hartman, 999 Sutter Street, San Francisco.

University of California Improves the Vaccine Treatment of Whooping-Cough.—A new whooping-cough vaccine which promises more effective treatment of this disease and less danger of untoward reactions

than the vaccines now in use has recently been developed by Dr. Albert Paul Krueger, associate professor of bacteriology at the University of California, with the assistance of Mrs. V. O. Nichols, research associate in bacteriology.

Announcement of this new vaccine, or pertussis antigen, as it is called, was made on May 6 before the Pediatrics Research Society in New York, following a preliminary series of tests on 202 cases of whooping-cough in California children. These clinical tests were made by Dr. Minnola Stallings, instructor in pediatrics, Dr. J. M. Frawley, Fresno physician, and Dr. Francis Scott Smyth, professor of pediatrics, all on the staff of the University Hospital. It is stated that the University of California vaccine differs from others in that no heat or chemicals are used in preparing it. It is believed that some of the less desirable reactions of whooping-cough vaccines have been due to heat denatured proteins. To avoid this possibility the new vaccine has been prepared by mechanical means.

CORRESPONDENCE

Subject of Following Letter: Comment on the Splendid Services of Dr. Junius B. Harris, Chairman of the Committee on Public Policy and Legislation.*

Dear Doctor Kelly:—Knowing the modesty of Dr. Junius B. Harris, I imagine that when he presents his report on legislation to the Council of the California Medical Association he will refrain from telling you and the Council members about the real work and worry that he expended in behalf of organized medicine. As one who saw him in action day and night during the legislative session, I am taking the liberty of making a few observations in the hope that you will pass them on to your colleagues.

I fear that the average man, be he engaged in a busy practice in a metropolitan office building or sitting in a small room over the village drug store, has little, if any, conception of the dangers that threaten his professional future at the hands of our lawmakers. Certainly I know that unless he has actually visited Sacramento he cannot conceive of the immense amount of work and responsibility that devolves upon the chairman of your Committee on Legislation and Public Policy.

Through years of close contact with affairs around the Capitol, Doctor Harris has built up a remarkable acquaintance with legislators and department heads. His opinions and suggestions are given respectful hearing. In all committees he was treated with the courtesy and dignity that befits his official position. The only deviation being the attack by Senator Tickle upon the floor of the Senate. He is at all times the doctor and never the politician. Hewing steadfastly to his course and never becoming involved in any side issues.

His personal sacrifice to attend to the duties of his office in the California Medical Association is tremendous. Day after day he devoted long hours to committee meetings or personal work with members of the legislature while patients waited or went elsewhere. It must be rightfully assumed that he lost a vast amount of practice during the legislative session because he could not be in the Capitol and in his office or the hospital at the same time.

It was a rare occasion when he was able to retire before one or two o'clock in the morning. Then up early for the morning committee meetings. The physical strain alone was terrific.

With a well-established practice and an enviable position in his profession, Doctor Harris would be

* This is a communication from Mr. Ben Read, executive secretary of the Public Health League of California, which was read to the California Medical Association Council on May 27, and by it ordered to be printed in the June California and Western Medicine. The report of the chairman of the Committee on Public Policy and Legislation was also ordered to be printed, and will be found on page 474.

perhaps among the last of those affected by any legislative action. Selfishly he need have little concern over what the legislature does, but in the interest of his profession, in the interest of the man "too busy" to give any thought to political or economic subjects, he makes a great sacrifice financially and physically.

The medical profession of California owes a tremendous debt of gratitude to Junius B. Harris, and it is in the hope that my feeble words may in some way carry home to your profession a realization of the great service he has performed that I take the liberty of addressing you.

Sincerely yours,

BEN H. READ.

Subject of the Following Letter: Excerpts from a Personal Letter from Dr. Rupert Blue, former Surgeon-General of the United States Public Health Service, on Subject of Bubonic Plague and Rat-Proofing Measures.

To the Editor:—Your letter of March 15 has been received. It was like a voice from the past, bringing pleasant recollections of our association in the work of absorbing interest and national importance. . . .

I shall be very glad to have you publish the paper on "Plague Control in 1903." . . . It is recalled, however, that the first permanent anti-rat and anti-plague measures were instituted in Chinatown in 1903-1904 and that they were successful beyond our fondest expectations. There was nothing in the literature on the subject and no criterion to guide us, and we were compelled to proceed in the face of organized opposition from the press, the people, and, sad to relate, from some of the leading medical men of San Francisco. It has been aptly said that the advocates of the revolutionary travel a hard road, and it was true with us.

It was a new orientation of an old problem; that is to say, to place the entire blame for the spread and continuance of the plague upon the rodent. Up to that time it was believed that the human factor played the principal or the only rôle in the dissemination and continuance of the disease. We proved, in 1903-1904, that sanitarians could ignore the human factor and depend entirely upon rodent extermination as a reliable measure of control. If this were true, then we had to devise better methods of extermination than the accustomed routine of poisoning and fumigation. The conclusion was soon reached that we had to build them out by the use of impervious material upon foundations, walls, and approaches. In other words, the prevention of harborage and breeding were the objectives we had in mind—that is to say, rat-proofing.

As you may recall, the mode of transmission of plague from rat to man by means of rat fleas was not known until 1906 or 1907, at which time the British Plague Commission published the results of their experimental work in India. Prior to this work, however, we had established the fact in 1904 that plague could be controlled by the application of anti-rat measures in Chinatown. The rat-proofing of buildings as an anti-plague measure was inaugurated at that time and was elaborated upon and proved beyond the peradventure of a doubt during the larger epidemic in 1907-1908.

Yours sincerely,

RUPERT BLUE.

1808 Eye Street, Washington, D. C.

Subject of Following Letter: Treatment of Impetigo

To the Editor:—For eight years now it has been my province to make a yearly routine examination of our high school boys here in Palo Alto, as school physician. In this work I have had opportunity to note the incidence of impetigo among three or four hundred boys annually. The last two years, as physician in charge of the small infirmary attached to the Palo Alto Shelter, for the transient unemployed, my field of observation has been widened. Our records there

show upward of one hundred cases of this disease, half of the cases of a most aggravated form. Private practice of eighteen years here affords its material, likewise.

So I was much interested in reading observations on impetigo by Dr. Samuel Hanson and Dr. L. F. X. Wilhelm in the Bedside Medicine symposium in the April number of CALIFORNIA AND WESTERN MEDICINE (page 269). Their articles had to do particularly with the new-born and infants.

It is noteworthy in their articles on treatment to learn of methods endorsed by them, or quoted as routine from others, that follow the method that we have learned here by experience to be best. I refer to the use of ammoniated mercury and a careful exclusion of soap and water for the cure of impetigo.

In our own experience, we have learned in formidable cases as well as in others that it is best to absolutely forbid the use of soap and water, or water alone, at the outset or any other stage of treatment. Where the infection has invaded the bearded region of the face, we do not allow shaving until entirely well. Our directions are: no soap and no water, even for the daily face bath. In private practice, where patients are allowed for urgent business reasons to shave daily, and where impetigo of this region is well seated, more than likely all methods of treatment will prove in the end unsatisfactory and the patient will go elsewhere for a better result. So I do not accept patients who will not conform to the rule. No shaving, then, but instead twice daily the bearded region must be anointed by a thorough rubbing in with the tips of the fingers, allowing ten or fifteen minutes for this procedure, of the ammoniated mercury, U. S. P. It will require two weeks before a complete and certain freedom from all signs of the disease may be expected. When shaving is once more begun, the face should be wiped as dry as possible immediately thereafter, and for several weeks longer the ointment should be lightly massaged in. For the scalp, no water, but a thorough rubbing in by the finger tips of a copious amount of the ointment (heaping tablespoonful), taking fifteen or twenty minutes for the rub. Shampoo away thereafter excess ointment with a soft towel. This should be repeated three times weekly for two weeks. By the end of that time it is allowable to have a soap and water shampoo.

The reason for the exclusion of water is of course the swelling of the cells of the epidermis with this water, because water along with the soap makes a thin oil-proof surface that precludes the ointment with its oily base from a proper absorption by the skin; in particular preventing its percolation down and along the hairs to their deepest root portions, where assuredly the most inaccessible nests of the infection are to be found. In like fashion, since the hairs are continuously flooded with oil secreted by their own oil ducts, any watery solution of a medicament is inferior to one of oil, even alcohol suffering in such a comparison. The reason for not allowing shaving is the certainty of innumerable microscopic cuts and abrasions from even the sharpest blade, which would serve as fresh seeding spots of the highly potent infectious matter.

On the hairy portions of the thighs, on the back of the neck, on the genitals, scrotum in particular, on the hairy chest, the rule is, daily or twice daily inunctions with copious amounts of the ointment. No water on any of these parts.

Where the thick coalescing scabs are encountered, in long neglected cases, as frequently seen behind the knees, on the flexor surface—or at the elbow, flexor surface—or in other parts, we plaster on the ointment thick with a tongue blade, working it in somewhat, and then cover with a dressing. We confidently expect to have the area desquamate its thick scab, and on the pliable oily base little or no bleeding results while the closing up and clearing off the skin is "just around the corner."

Ammoniated mercury, U. S. P., properly used, will cure any and all cases of impetigo—quickly, certainly, safely, stainlessly, and painlessly. The 5 per cent

strength is popular. My experience has been with the 10 per cent. In the many patients where this has been used, over large skin areas, often I have had but a single mild case of incipient salivation. This patient was, in my opinion, individually hypersensitive to mercury. Disagreeable sequelae from mercurial inunctions as needed until well are not to be apprehended. If the ointment is by accident introduced into the conjunctiva, it will prove to be intensely irritating. Nasal mucous membrane is not so affected.

Sulphur ointment has no place in treatment of impetigo. The sulphur is not strong enough to kill the contagion, but it is strong enough to burn tissues and decidedly hinder normal healing. Iodin, mercurochrome, merthiolate, hexylresorcinol, alcohol, gentian violet, ungventine, have their advocates and may suffice for mild infections, particularly in children. My individual preference is, as stated, ammoniated mercury, 5 per cent for very tender skins (infants), 10 per cent for most of all cases.

JOHN C. SILLIMAN.

1160 Bryant Street, Palo Alto.

Subject of Following Letter: Suggestion that Mr. Chester Rowell's Articles on California Antivivisection Activities Be Sent to All Voters of California.

To the Editor:—I have just finished reading Chester Rowell's articles on antivivisection (May CALIFORNIA AND WESTERN MEDICINE, page 352). Recently I was the recipient of some of the "anti" literature. I think Mr. Rowell's articles should be sent to all voters in California. Here is a way to do it. Every doctor sends out monthly statements. Why not print these articles in the form of "envelope stuffers" and ask every member of the California Medical Association to slip one into the envelope with his monthly statement. I could personally use five hundred, and would be glad to act as distributor for the twenty doctors in the west end of San Bernardino County.

Sincerely,

F. F. ABBOTT.

Ontario, California.

PUBLIC HEALTH LEGISLATION*

In the first period of the legislative session a total of 3,613 bills and constitutional amendments were introduced. These were carefully studied to learn the contents of each individual measure, and 230 were found that contained some reference to subjects directly or indirectly affecting the medical profession.

Meetings were held with representative groups in Northern and Southern California, and this list of 230 was boiled down to 79 pertinent bills, which were marked "Refer to Council." At these meetings each bill was gone over thoroughly and each meeting occupied almost an entire night. The California Medical Association Council then considered all of the 230 bills, with special attention to the 79. Action was taken instructing your Legislative Committee to approve or oppose the most important bills, and a report upon these will be rendered first.

SENATE BILLS

Senate Bill 160 (Seawell). A new act in re "hospital associations." Instructed to oppose. This bill died in committee as a result of the strenuous opposition that was aroused. It was never brought up for a hearing after our strength became known to the proponents,

* Editor's Note.—This report by Dr. Junius B. Harris of Sacramento, chairman of the Committee on Public Policy and Legislation, was submitted at the meeting of the Council held at San Francisco on May 27, 1933. The Council ordered its prompt publication in order that the members of the California Medical Association might have information concerning the public health legislation which has been discussed in California and Western Medicine during the last several months.

but nevertheless we did a great amount of work upon it. In connection with this bill and Senate Bill 953, special telegrams were sent to Peart, Kelly, Dickie, Hamlin, Cushman, Graves, Duffield, Wilson, King, Remmen, Roblee, Reinle, Crosby, and Cuneo. Phone calls were made to DeLappe, Green, Peers, Evelth, and Rosson.

Senate Bill 547 (Allen, Bush, Duval, Hays, Ingels, Moran, and Swing). A new act authorizing Director of Finance to sell and dispose of land and equipment of State Narcotic Hospital. Instructed to oppose in its original form. This bill was amended March 28 to the best advantage that could be obtained. It passed both houses and was approved by the Governor on April 25, and combines Spadra and Pacific Colony.

Senate Bill 552 (Fellom). Added a new section to the Political Code, relating to state psychiatrists; established division of psychiatry in Department of Institutions. Instructed to oppose. It died in committee.

Senate Bill 610 (Bush, Allen, Duval, Hays, Ingels, Moran, and Swing). Would have amended Section 5 of Medical Practice Act to abolish *per diem* of Board of Medical Examiners. Instructed to oppose. It died in committee.

Senate Bill 674 (Fellom). A new act masquerading under the guise of a "humane pound act." Instructed to oppose. By reason of its title Senator Fellom was able to have this bill referred to the Committee on Municipal Corporations, of which he is chairman. At the first hearing on this bill only myself and Luther Nichols of the University of California were present to oppose some fifty women proponents of the bill. The vote on the measure was a tie and it was held in committee for further consideration. Meanwhile letters and telegrams were sent to physicians in the home communities of members of the committee and I talked personally with each member of the committee. On March 15 Senator Fellom "begged" the bill out of the committee without recommendation. It was then twice amended from the floor of the Senate—once in an effort to satisfy the schools and laboratories, and once to meet the objections of the livestock men. We carried on a constant campaign with individual members of the Senate and did much work in securing letters, and wires to them from their constituents. No attempt will be made here to enumerate the number of letters, telephone calls, and wires to the deans of the medical schools, Stanford University Department of Anatomy, Hooper Foundation, Doctor Cutter of Cutter Laboratory, and others. We kept up a constant barrage as new developments arose. Among other things we sent letters to all physicians in Imperial County asking them to urge their Senator Hulse to oppose the bill, and to all physicians in Marin County asking them to urge their Senator Rein-dollar to oppose the bill.

Senator Fellom called up the measure for vote in the Senate on Monday, April 10. Under call of the Senate he secured its passage by one vote when Senator McKinley (who would have voted with us) was out of the city.

The bill then went to the Assembly. Fellom attempted to have it referred to the Assembly Committee on Municipal Corporations, even carrying this fight to the floor of the house, but he failed, and it went to the Assembly Committee on Public Health and Quarantine. It was necessary for us to start our campaign anew in the Assembly committee, and in addition to the schools, laboratories, and others, we contacted the key men in each county or district represented by members of the Public Health and Quarantine Committee.

On the date first set for the hearing on the bill, Doctors Geiger and Coffey of San Francisco were present, as was Doctor Cutter and his brother, Doctor Parschal of the State Veterinarians' Association, Doctor Danforth of Stanford University Department of Anatomy, and a large delegation from the Woman's Auxiliary to the Sacramento Medical Society. The

meeting was postponed on account of the lateness of the hour of adjournment of the Assembly. It was necessary for us to continue our campaign through another week, meeting each new turn in events with wires, letters, or phone calls. We polled the members of the committee frequently to learn if there was any change in sentiment. Again on April 26 the meeting was postponed. The bill finally came up for hearing on May 3.

Although it was 10:30 p. m. before the committee could meet, the proponents were given ample opportunity to present their arguments. The opposition to the bill was presented by Cutter, Parschal, Harris, and Kallam. Kallam moved to table the bill. Boyle seconded the motion and vote was: Aye—Kallam, Levey, Boyle; No—Field, Hoffman, Roberts. Mr. Roberts then moved that the bill be given a "do pass" recommendation. Field seconded the motion, and the vote was: Aye—Field, Hoffman, Roberts; No—Boyle, Kallam, Levey. This left the bill in committee, but it was signed out of committee on the following day.

With the bill before the main body of the Assembly for passage, it was necessary for us to take up a campaign with each member of that body. The entire Assembly was polled so that we might know where our strength lay, and wires, phones, and letters were sent to districts whose representatives were against us. We kept up this barrage, with constant polling and checking, until May 12, when the bill came up for vote about 11 p. m. Fellom had worked day and night in the floor of the Assembly, threatening, begging, and using every possible aid in the bag, to corral votes for his bill.

Assemblyman McCarthy presented the bill for Senator Fellom. Following out a carefully prepared campaign, Mr. Crist offered amendments that robbed the bill of its purpose. Speaking in favor of the bill were McCarthy, Hornblower, Dempster, Greene, O'Connor, and Maloney. Opposing were Boyle, Cronin, Hoffman (who presented data to show that the only new items in the bill not already on the statute books was the antivivisection paragraph). C. Ray Robinson, Powers, Frasier, Kallam, Lyon, and Alter also fought the bill. The amendments were adopted 46 to 32, and the proponents then asked that the bill be re-referred to committee with a promise that they would not call it up during the present legislature. They stated that the amendments made the bill "not worth the paper upon which it was written." A direct vote was not taken on the merits of the bill, but two test votes showed we had sufficient strength to kill it. Among the telegrams urging passage of the bill were those from Mayor Porter of Los Angeles, Los Angeles Board of Supervisors, by Frank L. Shaw, chairman, Mr. and Mrs. George Arliss, and the mayor of Oakland. The Los Angeles Supervisors' telegram was later discounted by special wires to each member of the Los Angeles delegation from Supervisor Thatcher (work of Toland and others). Practically every county medical society in the state responded with wires, and we laid down a terrific barrage against the measure.

Senate Bill 782 (Mixer). Amending 4223 of the Political Code relating to county hospitals. Authorized boards of supervisors to establish branches of county hospital. Permitted admission to said hospital of residents of the county who are not completely destitute at a charge not exceeding cost of services rendered. Instructed to oppose. Died in committee.

Senate Bill 953 (Fellom). New act in re hospital associations (corporate medicine). Instructed to oppose. Previous reference was made to special wires, etc., in connection with Senate Bill 160. This bill was given a hearing on March 20. Present from out of the city to oppose it were: Kelly, Schaupp, and Remmen. Preliminary conference of Kelly, Lenehan, Remmen, Schaupp, Harris, Green, and Read. At the hearing before the Senate Committee on Public Health and Quarantine, Senator Fellom, Doctors Yoell and Brown, and Attorney Cushing appeared in behalf of the bill. Kelly, Callison, and Remmen opposed it. Difani moved to table the bill. Mixer seconded.

Aye—Difani, Mixter, Williams. Not voting, Seawell and Gordon. Fellom protested to Chairman Williams, but to no avail.

ASSEMBLY BILLS

Assembly Bill 18 (Maloney). Amending Chiropractic Initiative Act. Increasing fees, increasing salary of secretary, enlarging reciprocity, etc. This bill was not brought up by its proponents until May 6, near the end of the session, when Hunt, secretary of the Board of Chiropractic Examiners, appeared before the committee with Lobbyist Tex Hurley. Doctor Pinkham was anxious to get a definition of chiropractic through this bill, and amendments were prepared by Kington of San Francisco, representing the "straight" chiropractors. Due to the length of the amendments and the late hour the committee would not adopt them. The bill passed the Assembly and was referred to the Senate Committee on Public Health and Quarantine. On May 8 it was given a hearing by this committee. Hurley presented some amendments which were adopted. Harris presented the Kington amendments, which were opposed by Hurley. Because a controversy developed, further consideration of the bill was put over for a special meeting, but a quorum could not be obtained and the bill died in committee.

Assembly Bill 245 (Crowley). Amends Narcotic Rehabilitation Act, relating to addicts. Instructed to approve. This bill passed both houses and was signed by Governor Rolph on April 21.

Assembly Bill 288 (Grubbs). Amending Workmen's Compensation Act so that registered nurses employed by a hospital accommodating three or more patients are employees thereof under Workmen's Compensation Act. Opposed by hospitals. Commission said court ruling already covered this situation, and bill died in committee.

Assembly Bill 313 (Hornblower). Amending Medical Practice Act, relating to chiropody, so that "mechanical treatment" included "the correction of malimposed bones," etc. Instructed to oppose in its original form. Conference was called by Harris on March 27, attended by Hittenberger, Benjamin, Attorney Wagner, Whitten (representing chiropodists), Lenehan of druggists, Harris, and Read. Amendments were agreed upon satisfactory to all. The bill passed both houses and is now a law.

Assembly Bill 317 and *Assembly Bill 318* (Cronin). Amending Narcotic Law. Instructed to oppose in original form. At a hearing before the Medical and Dental Laws Committee on March 20, Doctor Harris objected to the provisions requiring records be preserved for two years showing name and address of person for whom prescribed or dispensed, quantity of drug and purpose for which prescribed or dispensed—all of this open to inspectors from dental, veterinarian and other boards. Amendments were adopted which were acceptable to Harris, and the bills passed both houses and were approved by Governor Rolph on May 8.

Assembly Bill 349 (Boyle). Abolishing Division of Narcotic Enforcement and transferring powers and duties thereof to State Board of Pharmacy. Instructed to approve. Bill not pressed, and died in committee.

Assembly Bill 539 (Lyon). Amends Political Code, relating to persons mentally disordered. Instructed to approve. Passed the Assembly on March 28 and first heard before the Senate Committee on Public Health and Quarantine on April 3. Doctors Myers, Rebec, and Harris spoke in favor of the bill. Sheriffs opposed being represented by Sheriff Fitzgerald and Attorney Cunningham. Senator Seawell expressed opposition, and a telegram was read from osteopaths asking an opportunity to be heard on the bill. The hearing was postponed until April 10, at which time Doctors Myers and Harris and Senator Ingels appeared in favor of the bill, with the sheriffs en masse opposing it. Sheriffs were present from counties represented by members of the committee. Cunningham, Veale, et al. spoke in opposition (sheriff from Mariposa, sheriff from San Diego, etc.). Daniels presented amendments for osteopaths, which were adopted. The committee, in executive session, tabled the bill. On April 24 the

bill was lifted from the table and amendments, submitted by Doctor Myers and presented by Read, were adopted. The bill was ordered reprinted and reheard. On May 1 it was recommended "do pass" as amended. Senator Stow agreed to handle the measure on the floor of the Senate, and it was passed without a dissenting vote on May 8. The Assembly concurred in the Senate amendments on May 10. Just a few moments before, the sheriffs laid down a barrage of telegrams on the assemblymen, again opposing the bill. When the bill was placed before Governor Rolph the sheriffs were again present in force. Doctor Harris spoke for the bill. The Governor felt the controversy indicated he should veto the bill, and he did this with the statement, "without prejudice," and referred it to the after-recess session.

Assembly Bills 557, 558, and 559 (Cronin, Levey, Feigenbaum, Williamson, Roland, Hoffman, Fisher, and Anglim). Three bills permitting injunctions for illegal practice. Instructed to approve. These measures were given the brand of "lawyers' bills," and vigorous opposition was offered by real estate men, title companies, banks, etc. They were amended to meet the most serious objections and passed the Assembly, but were killed on the floor of the Senate.

Assembly Bill 647 (Mayo). Amending Workmen's Compensation Act. Limiting amount of compensation to be paid. Instructed to oppose. Died in committee.

Assembly Bill 695 (C. Ray Robinson). Instructed to oppose. Companion bill to Senate Bill 160. Killed in committee.

Assembly Bill 784 (Ross). Reducing license fee of itinerant drug vendors. Instructed to oppose. Killed in committee.

Assembly Bill 795 (Craig). X-ray technicians' bill. Instructed to oppose. Killed in committee.

Assembly Bill 900 (Rawls) (by request). Amending Workmen's Compensation Act to include "chiropractic" treatment in addition to medical and hospital treatment. Rawls agreed not to push this bill and to ask the committee to table it. The bill was called up before the Committee on Insurance on April 25. Tex Hurley stated that he had authority from Rawls to take it up. Brisbane, Pettis, Burbank (representing insurance companies), and Read opposed it. Maloney "begged" it out of committee. Aye—Crist, Crowley, Frazier, Maloney, Robinson, Turney. No—Cronin, Evans, Stream. Physicians in Rawls's district were notified and they flooded him with letters. He denied that he had given Hurley authority to represent him and agreed to see that the bill was tabled. O'Connor then took up the battle for the bill. Physicians and insurance companies in his district were asked to wire him. They responded, but he paid no attention to them. He put up a stubborn fight on the floor of the Assembly, but we were finally able to have the bill tabled on the night of May 6. Defeat of this bill saved physicians thousands of dollars annually.

Assembly Bill 904 (Mayo). Amending Political Code, relating to Industrial Accident Commission, provided that members serve at the pleasure of the Governor. Instructed to oppose. Died in committee.

Assembly Bill 986 and *Assembly Bill 987* (Crist). Relating to expert testimony. Both approved and referred to State Bar Association. Died in committee.

Assembly Bill 1034 (Boyle). Relating to state aid for persons afflicted with tuberculosis. Instructed to oppose. Died in committee.

Assembly Bill 1159 (Gilmore). Creating "Naturopathic Association of California. This bill was given a hearing before the Committee on Public Health and Quarantine on April 12. Proponents—Jensen, Ganion, Webb, Bennett, Burke. Opponents—Harris, Ratledge, and Pinkham. Tabled by committee.

Assembly Bill 1102 (Robinson). Accident insurance definition expanded to include indemnity, medical or hospital or similar service. This bill was sent out of committee with a "do pass" recommendation, but we caught it on the floor of the Assembly, had it referred to the Committee on Insurance and amended

"medical, hospital or similar service" out of it. The bill then passed both houses and has been signed by Governor Rolph.

Assembly Bill 1277 (Nielsen). "Clinic Bill." Instructed to approve. Soon after this bill was introduced Doctor Pomeroy of the Los Angeles County Health Department, started vigorous opposition. He wrote a number of letters to Nielsen and other assemblymen. It was amended to somewhat meet his objections and, due to the good work of King and Remmen, he did not appear to oppose it. (See note about Remmen's report.) Ruddock appeared before the Committee on Medical and Dental Laws on April 3 and presented the bill. During the hearing, Morgan asked why include cities and counties. Meehan made the motion to give it a "do pass" recommendation. Boyle seconded, and the vote was unanimous. Because it was an appropriation measure it had to go to the Ways and Means Committee and await passage of the budget. In the Ways and Means Committee, amendments submitted by Dr. Walter Coffey were adopted and it passed the Assembly without a dissenting vote. The bill was attacked in Sullivan's magazine, copies of which were sent to legislators. Also a number of "crank" letters were received from Oakland by some assemblymen.

Assembly Bill 1306 (Dempster). Established a "State Board of Naturopathic Examiners." This bill was tabled in committee on March 20 after three different factions of chiropractors and naturopaths failed to agree and aired their scrap before the committee.

Assembly Bill 1321 (Boyle). Adding a new section to the Penal Code, relating to advertising drugs and medicines by radio. Instructed to approve. This bill passed the Assembly without a dissenting vote, but struck a snag in the Senate Committee on Public Health and Quarantine. Harris, Green, and Boyle spoke in its behalf. It was amended in committee, but was killed on the floor of the Senate.

Assembly Bill 1727 (Jones). In original form provided that ownership of real property or an interest therein would not disqualify person from receiving aid under the Pauper Act unless the property was such that it could not be readily sold or made available as means of support. We conferred a number of times with Mr. Jones in re this bill, and we are convinced of his sincerity in desiring to remedy a situation that does not apply directly to county hospitalization. He was agreeable to our amendments as suggested at Del Monte, but with the rewriting of the Pauper Act by Assembly Bill 1778, his bill was rewritten in an entirely new form. It passed the Assembly and we opposed it before the Senate Committee on Unemployment and were ably assisted by Mr. Morosco of the California Taxpayers' Association. It was tabled in the committee, but in the closing hours of the session was amended and passed. Morosco and Senator Hays (who was bitterly opposed to the bill in its original form) claim they see nothing vicious in it as amended. They say that all counties are now operating under the method the bill provides. However, it appears questionable.

Assembly Bill 1740 (Maloney). Placing chiropractors in all state institutions. Instructed to oppose. Killed in committee.

Assembly Bill 1739 (Maloney) (by request). Amending Workmen's Compensation Act to provide that term "physician" shall include licensed chiropractors. Opposed. Killed in committee.

Assembly Bill 1743 (Dempster). Authorized Board of Supervisors to contract to pay a supervising fee of not to exceed 15 per cent of the cost of emergency hospital care of needy sick and dependent persons by existing hospitals in the county.

Empowers Board of Supervisors to provide for housing care and maintenance of the dependent poor and partially dependent citizens of the county.

Empowers Board of Supervisors to pay for any of such services with warrants payable within five years from the date of issue or without interest.

This appeared to be dangerous and it was killed in committee.

Assembly Bill 1778 (Fisher). This was a skeleton bill and when it was filled in on April 28 it rewrote the entire Pauper Act of the state along lines developed in two years' study by the various welfare boards of the state. Mr. Fisher gave us the first draft of the bill and we referred it to Peart, Kelly, Morosco, Dick Barrett, and others. They did not report any dangerous provisions, so we did not oppose it. It passed both houses.

Assembly Bill 1813 (O'Connor). Abolishing Department of Professional and Vocational Standards. Placed medical examiners and others under Department of Health. Instructed to oppose. Died in committee.

Assembly Bill 1830 (Field). Amending Rabies Act, relating to diseased birds and animals. Instructed to oppose. Died in committee.

Assembly Bill 1847 (Dempster). Licensed fortune tellers, fakirs, and similar persons engaged in treating the human body or the human mind. Instructed to oppose. Died in committee.

Assembly Bill 1849 (Frazier). Abolished provisions regarding establishment and maintenance of tuberculosis preventoria and the state subsidy therefor. Instructed to oppose. Died in committee.

Assembly Bill 1924 (Gilmore). Prohibited sale except by physicians and surgeons of any appliance for the correction, bracing or healing of any member of the human body except the feet; sale of such appliances for the feet by licensed chiropodists only. Instructed to oppose. Killed in committee.

Assembly Bill 2190 (Bliss). Pay patients in county hospitals. This bill created the most widespread interest of any measure in which we were concerned. It was first amended on March 10, but the amendments did not meet with our approval, so we had it referred to the Committee on County Government for a hearing. This hearing was set for March 16. Letters, telegrams, and telephone calls poured in upon practically every assemblyman, protesting passage of the bill. Over three hundred telegrams were laid upon the desk of Mr. Brock, chairman of the committee. Taxpayers' groups, the Los Angeles Chamber of Commerce, San Francisco Chamber of Commerce, the Utilities, Manufacturers' Association, State Real Estate Association, Agriculture, Railroads, Church Organizations, and large taxpayers in all parts of the state opposed it. When the bill came up for hearing on March 16, Mr. Bliss asked that action be postponed and a conference be called to attempt to work out a compromise. Dick Barrett called the conference for March 21 in the Senator Hotel.

On April 6 another conference was held on proposed amendments.

On April 17 we gave the suggested amendments to A. R. Kennedy to whip into shape for presentation. We presented the amendments to Mr. Bliss on April 18 and the committee ordered the bill reprinted.

On April 29 a further conference was held, attended by Barrett, Sullivan, Johnson, Bliss, Harris, and Read. Mr. Bliss presented some amendments. Telephone conferences were held with Heckendorf and Peart. The amendments were gone over again on the following day by Barrett, Sullivan, Harris and Read, and copies mailed to Peart. Discussions followed, until on May 1 Mr. Bliss said that there were so many selfish interests showing up in connection with the bill that he was inclined to drop it. On May 2, Bliss received a wire from Heckendorf stating that his board would not accept the bill as amended unless provision was made to accept pay from those able to pay something. At a conference of Peart, Barrett, Johnson and Harris, it was decided to drop further consideration and table the bill. This was done.

Williams Senatorial Resolution and Investigating Committee. This is a senatorial resolution providing for a study of the costs of medical care, hospitalization, etc. It was passed by the Senate. It provides for a com-

mittee of three senators (Williams, Difani, and Tilton) to make the study. No state funds provided. The committee may accept donations for the study from eastern foundations like the Rosenwald Foundation. It is rumored that Mr. Celestine Sullivan is to be the secretary of this committee.

The legislature was in session 104 days and 4 hours. In all, 3,966 bills were introduced. In the second period (after the February recess) many new bills were introduced and many skeleton bills were filled in.

There were introduced into the Senate, 1,331 bills, constitutional amendments or resolutions. Upon one day alone, January 28, 407 bills were introduced in the Senate.

There were 2,635 bills, constitutional amendments or resolutions introduced in the Assembly. On one day, in the Assembly, 569 bills, 14 constitutional amendments, 3 concurrent resolutions, and 3 joint resolutions were introduced.

It was necessary to watch these closely and scrutinize all new measures very carefully. Seventy-three skeleton bills were under constant watch to check up on new matter. The daily journals and histories were gone over minutely each day so that we could at all times know the status of bills in which we were interested. The amount of time and effort necessary to do this properly can be easily imagined.

Weekly reports of the progress of bills we were watching were compiled and mailed to officers of the California Medical Association. Copies of bills were sent to physicians interested in specific measures and these were kept up to date as amended copies appeared.

The chairman of the Committee on Public Policy and Legislation devoted an average of eight hours per day to legislation during the second period or a total of more than six hundred hours. Committee meetings attended exceeded 125 in number. These committees met in the early morning, late afternoon, and in night sessions. At times three committees in which we had bills under observation were in session simultaneously. It was also necessary to constantly be on the alert for special meetings of committees and to keep in touch with committee members so that we might be advised as to unexpected developments.

There are thirty-six standing committees in the Senate. We attended meetings of seven of these, attending every meeting of the Public Health and Quarantine Committee.

In the Assembly there are fifty-five committees. We attended meetings of eleven of these committees, and in constant attendance of every meeting of Hospitals and Asylums, Medical and Dental Laws, and Public Health and Quarantine Committees.

The chairman of your Public Policy and Legislation Committee made a personal appearance before committee on the following bills:

Senate bills—160, 322, 478, 483, 531, 547, 599, 610, 674, 953, 994, and S. C. R. 14.

Assembly bills—18, 166, 167, 209, 245, 247, 273, 282, 283, 288, 313, 317, 318, 539, 557, 558, 559, 648, 695, 771, 795, 827, 900, 982, 983, 984, 985, 1149, 1159, 1277, 1306, 1321, 1340, 1341, 1342, 1369, 1587, 1727, 1778, 1809, 1830, 1924, 1998, 2069, 2123, 2190, 2239, 2246, A. C. A. 4.

Personal appearances were made on many of these bills several times in the parent house, and one or more times in the opposite house. Some of the committees met three times weekly. Meetings beginning at all hours from 7:30 a. m. until late in the night. Some committees met "upon adjournment," which meant that constant watch must be made to check hour of adjournment. A great many times "fixed" hour of committee meetings would lapse. There would be a call to the house. No information could be obtained as to hour of adjournment, and committee meeting would not be held until late at night. For instance, on the antivivisection bill, the meeting scheduled for 4 p. m. was held at 10:45 p. m.

Over 500 letters were written, telegrams exceeded 200, and long distance telephone calls totaled more than 100.

In the closing days of the session the legislature remained at work eighteen to twenty hours per day, and it was necessary to be on the job every moment.

It is impossible to know at this time just what matters will be considered in the adjourned session, which convenes on July 17. While it is the general impression that only tax and financial matters will be considered, some legal authorities say that any bill before any committee can be called up. It is possible that some of the measures we have tabled may be brought to light and is, therefore, imperative that we maintain an equally close watch over the July session, which will commence on July 17.

SUMMARY

Legends: d. c.—died in committee; p.—passed; s.—signed; d. s. c.—died in Senate committee.

I. SENATE BILLS

56—d. c.	629—d. c.
160—d. c.	674—defeated in Assembly.
317—d. c.	724—d. c.
322—p. May 12.	782—d. c.
323—p. May 11.	802—d. c.
478—d. c.	953—d. c.
483—d. c.	970—d. c.
531—p. May 12.	994—d. c.
545—to enrollment May 12.	1010—p. May 12.
547—s. April 25.	1061—d. c.
552—d. c.	1602—d. c.
599—d. c.	1063—d. c.
608—d. c.	1064—d. c.
608—d. c.	1152—d. c.
610—d. c.	1153—d. c.
611—d. c.	S. C. R. 14—p. May 12.
612—d. c.	

II. ASSEMBLY BILLS

18—d. s. c.	971—p. May 12.
19—d. c.	979—p. May 12.
76—d. s. c.	980—to Governor May 12.
78—d. c.	982—d. c.
83—s. April 1.	983—d. c.
113—d. c.	984—d. c.
166—d. c.	985—d. c.
167—d. c.	986—d. c.
172—d. c.	987—d. c.
209—d. c.	1018—d. s. c.
211—d. c.	1027—d. c.
213—d. c.	1029—d. c.
245—s. April 21.	1034—d. c.
247—d. c.	1038—d. s. c.
255—p. May 12.	1065—s. April 21.
273—d. c.	1074—d. c.
277—d. c.	1084—d. c.
282—s. April 13.	1102—to Governor May 12.
283—s. April 13.	1120—d. c.
288—d. c.	1121—d. c.
313—to Governor May 12.	1134—d. c.
317—s. May 8.	1135—d. c.
318—s. May 8.	1149—d. s. c.
335—to Governor May 5.	1150—d. c.
349—d. c.	1159—d. c.
359—d. c.	1162—d. c.
459—s. May 8.	1166—d. c.
477—d. c.	1168—d. c.
493—d. c.	1171—p. May 12.
534—d. c.	1173—p. May 12.
539—to enrollment May 10.	1208—d. s. c.
557—defeated in Senate May 11.	1267—d. c.
558—d. s. c.	1277—p. May 12.
559—d. s. c.	1297—d. c.
564—d. c.	1298—d. c.
565—d. c.	1306—d. c.
578—d. c.	1321—defeated in Senate.
593—d. c.	1322—d. c.
647—d. c.	1323—d. c.
648—d. c.	1340—to enrollment May 12.
649—d. c.	1341—to enrollment May 12.
650—d. c.	1342—to enrollment May 12.
651—d. c.	1356—s. May 8.
652—d. c.	1369—d. s. c.
695—d. c.	1370—to Governor May 11.
699—s. May 3.	1418—d. c.
771—s. April 21.	1423—d. c.
772—d. c.	1461—d. c.
773—d. c.	1487—d. c.
774—d. c.	1587—d. s. c.
784—d. c.	1590—d. c.
795—d. c.	1633—d. c.
801—d. c.	1635—to enrollment May 12.
814—s. April 21.	1636—d. c.
827—p. May 12.	1637—d. c.
900—laid on Assembly table May 6	1638—d. c.
902—d. c.	1639—d. c.
903—d. c.	1640—d. c.
904—d. c.	1641—d. c.
926—p. May 12.	1642—d. c.
957—d. c.	1643—d. c.
	1644—d. c.
	1645—d. c.
	1646—d. c.
	1647—d. c.

1648—d. c.	1712—d. c.
1649—d. c.	1713—d. c.
1650—d. c.	1714—d. c.
1651—d. c.	1727—to enrollment May 12.
1652—d. c.	1739—d. c.
1653—d. c.	1740—d. c.
1654—d. c.	1743—d. c.
1655—d. c.	1777—d. c.
1656—d. c.	1778—to enrollment May 12.
1657—d. c.	1779—d. c.
1658—d. c.	1780—d. c.
1674—d. c.	1809—d. c.
1682—d. c.	1813—d. c.
1689—d. c.	1830—d. c.
1690—signed by Governor	1847—d. c.
April 11.	1848—d. c.
1691—died on file.	1849—d. c.
1692—died on file.	1902—d. c.
1693—laid on Assembly	1924—d. c.
table.	1952—d. c.
1694—d. c.	1998—d. s. c.
1695—d. c.	2003—d. c.
1696—d. c.	2046—d. c.
1697—d. c.	2047—d. c.
1698—d. c.	2069—to Governor May 13.
1699—d. c.	2123—p. May 12.
1700—d. c.	2141—d. c.
1701—d. c.	2142—d. c.
1702—d. c.	2148—d. c.
1703—d. c.	2157—d. c.
1704—d. c.	2190—d. c.
1705—d. c.	2218—d. c.
	2239—d. s. c.
	2246—signed May 11.
1706—d. c.	2250—d. c.
1708—d. c.	2261—d. c.
1709—d. c.	2279—d. c.
1710—d. c.	2299—d. c.
1711—d. c.	A. C. A. 4—d. s. c.

MEDICINAL LIQUOR

Restrictions Upon Physicians in Prescribing Liquor. Under date of May 13 the United States *Daily* printed the following news item:

"Beginning Monday, May 15, physicians will have greater latitude in prescribing medicinal liquors for their patients. As much as thirty days' supply may be prescribed at one time, and in exceptional cases the supply may be for ninety days.

"Regulations to carry out the Act of Congress of March 31, 1933, were issued during the week by the Bureau of Industrial Alcohol with the approval of the Secretary of the Treasury and the Attorney General.

"Prescriptions will no longer be required to be written in duplicate, and until January 1, 1934, physicians holding permits and authorized to prescribe liquor will be furnished books containing serially numbered original and duplicate blanks, but the latter will be used as originals.

"Each prescription must show the kind and quantity of liquor prescribed, name and address of patient, with other information, and must be filled within seven days. Physicians must maintain a confidential record showing the ailment for which the prescription is issued, but such record will not be disclosed except in a court of equity or where disclosure is required in connection with enforcement of the National Prohibition Act.

"Retail druggists will no longer be required to keep duplicates of prescriptions, nor to report the names and addresses of persons getting prescriptions, but must make a special entry in reports to show the filling of any prescription calling for more than one quart of liquor or one gallon of vinous liquor." . . .

New Regulations Concerning the Medicinal Use of Liquor.—A summary of the new federal regulations which went into effect on May 15 is printed in *The Journal of the American Medical Association*, May 13, 1933, page 1549. It is noted therefrom that many items dealing with these regulations which have been printed in the newspapers have been quite in error. The following excerpts indicate the scope and procedure in the new regulations:

"Sec. 6. A physician shall not prescribe for a patient at any one time a quantity of spirituous or vinous liquor in excess of what he in good faith believes is required to meet the medicinal needs of the

patient as shown by the patient's condition at the time of prescribing.

"Sec. 7. No prescription shall be issued for a quantity that in the judgment of the physician will last, when used as prescribed, more than thirty days; except that if a patient's medicinal needs will with reasonable certainty continue for a period longer than thirty days, a physician may prescribe for that patient at one time a quantity of spirituous or vinous liquor sufficient to meet such needs, in which case the physician shall endorse on the prescription the word "special" and within twenty-four hours after its issue shall notify the Supervisor of Permits in writing of the issuance thereof, giving all the information required to be written on prescriptions by Section 11, without disclosing the nature of the patient's ailment. In no case shall a physician issue a prescription for a quantity of spirituous or vinous liquor in excess of that required to meet the medicinal needs of his patient for a period of ninety days.

"Sec. 8. No person shall by any statement or representation that he knows is false, or could by reasonable diligence ascertain to be false, induce any physician to prescribe liquor for medicinal use (1) when there is no medicinal need for such liquor or (2) in excess of the amount of medicinal liquor needed.

"Sec. 9. Only a physician holding a permit to prescribe liquor may issue a prescription therefor. No physician shall prescribe liquor unless after a careful physical examination of the person for whose use such prescription is sought, or if such examination is found impracticable, then upon the best information obtainable, he in good faith believes that the use of spirituous or vinous liquor as a medicine by such person is necessary and will afford relief to him from some known ailment. It is suggested that in determining the quantity to be prescribed, the physician inquire of the patient concerning the quantity of liquor, if any, recently prescribed for the patient by other physicians.

"Sec. 10. Until such time, not earlier than January 1, 1934, as the stamps mentioned in Section 2 of the Act of March 31, 1933, are printed and furnished to physicians, all duly qualified physicians holding permits and authorized to prescribe liquor will be furnished a sufficient number of prescription blanks, Form 1403, in serially numbered books of 100 original and 100 duplicate blanks each, to meet their requirements. These blanks may be procured free of cost by the physician from the Supervisor of Permits.

"Sec. 11. The physician may issue prescriptions, as herein provided, using each blank in the book, those on which the word "Duplicate" is printed as well as those marked "Original," as an original prescription. This will enable the physician to write 200 original prescriptions from each such book of blanks. Attached stubs must be filled in by the physician at time the prescription is written. . . ."

"Sec. 13. Before completely exhausting the prescription Forms 1403 in the book on hand, the physician may apply to the Supervisor of Permits for a new book. The cover on the back of the prescription book must be detached and used in applying for a new book of Form 1403 prescription blanks."

"Sec. 15. A record shall be kept by every physician who issues a prescription for spirituous or vinous liquor, in a bound book alphabetically arranged according to surnames of patients, showing the date of issue, the amount of spirituous or vinous liquor prescribed, to whom prescribed, the period for which prescribed, the purpose or ailment for which it is to be used, and directions for use, stating the amount and frequency of the dose. The record book herein required to be kept shall be procured by the physician through commercial channels, and will not be printed or furnished by the Government.

"Sec. 16. No physician shall be called upon to file any statement of the ailment for which spirituous or vinous liquor is prescribed, in the Department of Justice or Department of the Treasury, or any other office of the Government, or to keep his records in such a way as to lead to the disclosure of any such ailment except when lawfully required in the following manner. . . ."

TWENTY-FIVE YEARS AGO*

EXCERPTS FROM OUR STATE MEDICAL JOURNAL

Vol. VI, No. 6, June 1908

From some editorial notes:

Are Medical Organization and the State Society Worth While?—I ask your indulgence, for a few moments, that I may present to you some facts, partly historical and partly statements of altruistic purposes; but I believe that they are of sufficient importance to require your attention.

1902, at the request of the council, I assumed the editorial control of your journal—in fact, started it. . . .

As you all know, conditions in the medical profession in this state were at that time chaotic, to say the least. The state society had never numbered more than 350 members and very few counties in the state could boast a county medical society. . . . Before the end of 1903 a considerable number of county medical societies had been organized, and during the following year the work was continued. . . .

Was it worth while to give the best years of a man's life to this work, or not? Did it appear that the results would be commensurate with the effort? . . .

Is the journal of your society worth while? Is it of any value to you? Does it in any way bring you into touch with other parts of the state, with what men in other counties are doing, with what is going on in the work of your fellow physicians elsewhere? Does it ever offer you anything of value to yourself? If not, it is useless; let us stop it.

If it is not worthwhile to do these things—all of them, or any of them or so many of them as we may be able to do—then in God's name, let us find it out at once! . . .

But if these things are worth while—and it is up to the members of the medical profession to say whether or not they are to be considered as worth working for—as worth while—then let us get busy and each one do his best and his hardest to bring them about. . . .

From an article on "Medical Treatment of Goiter" by Dudley Fulton, M. D., Los Angeles.

The subject-matter of this paper will be devoted largely to the medical treatment of Graves' disease, for the reason that but little may be expected from medical treatment in the other forms of goiter.

From an article on "The Surgical Treatment of Goiter" by Wallace I. Terry, M. D., San Francisco.

The surgical treatment of goiter did not assume any degree of importance in the United States until five years ago, when, owing largely to the communications of Theodore Kocher and his son, Albert, as to their results in the treatment of over two thousand cases, the medical profession of this country began to realize how much could be done surgically for the relief of many conditions dependent upon the thyroid gland. . . .

From a "Discussion on the Symposium on Thyroid Gland."

Dr. Stanley Stillman, San Francisco: It was just about twenty-five minutes ago that President Evans asked me to give the surgical treatment of goiter before the state society, and while it may have seemed to him a flattering proposition to me, I consider that he must have thought me a damn fool. If there is any subject upon which my mind is not at all clear, it is the subject of surgical treatment of goiter. . . .

Dr. F. Dudley Tait, San Francisco: It may be of historical interest to note that the disease under discussion was described as early as 1825 by Paré (?) and

* This column strives to mirror the work and aims of colleagues who bore the brunt of society work some twenty-five years ago. It is hoped that such presentation will be of interest to both old and recent members.

(Continued on Advertising Page 18, front section)

BOARD OF MEDICAL EXAMINERS OF THE STATE OF CALIFORNIA†

By CHARLES B. PINKHAM, M. D.
Secretary-Treasurer

News Items

"Accused of violating the State Medical Practice Act, Mrs. Jean De Desley, beauty operator, arrested at the instigation of Mrs. June Fawcett of 1933 North Bronson Avenue, a patient, was released yesterday under \$1,700 bail. . . . Mrs. Fawcett charges she submitted to a face treatment for the removal of freckles and other blemishes as a part of her course in beauty culture and that she is permanently disfigured. She charges that the treatment was given her by Mrs. De Desley, who used a lotion of carbolic acid and croton oil, and that she suffered third and fourth degree burns under the eyes and on both cheeks and chin. . . . Mrs. De Desley . . . is also known as Jean Ferguson." (Los Angeles Times, April 24, 1933.)

"Joseph Wall of Oroville was sentenced to 180 days in the county jail for practicing medicine without a license, following his plea of guilty yesterday. Commitment was withheld by Judge Harry S. Hills, however, on the understanding that Wall refrain from practicing medicine. The man is said to have recently received a chiropractor's diploma from a correspondence school." (Press dispatch dated Oroville, April 15, 1933, printed in the Oakland Tribune, April 15, 1933.)

"Bench warrant for the arrest of Dr. Benjamin Stanford Claunch, lecturer and asserted healer, was ordered issued today by Superior Judge James L. Atteridge when Claunch failed to appear in court for satisfaction of a judgment against him of a \$100 fine for advertising himself as a medical practitioner. Claunch was to have appeared a month ago in court to pay the fine or go to jail for ninety days." (Santa Cruz News, April 21, 1933.) (Previous entries, December, 1932, and May, 1933.)

"Judge D. L. McCharles' courtroom offered a perfect setting for the retrial of S. B. Parker, charged with practicing medicine in California without a license. . . . A full complement of good men and true was on hand from whom to select a jury; witnesses for both sides were ready with their testimony—in fact, everything was on hand for a perfectly good trial—except the man to be tried! And that small item simply spoiled the whole darned show! . . . On Parker's failure to appear, his attorney promptly asked that the court issue a bench warrant. . . ." (Tustin News, April 21, 1933.)

"The purchase of the H. S. Burke Building, now occupied by state departments in San Francisco, was assured today when the Assembly passed S. B. 672, by Senator J. M. Inman and others. . . . The purchase price fixed for the building and grounds in the Inman Bill is \$320,000. . . . The purchase will be made with surplus funds of self-supporting state departments." (Sacramento Bee, May 1, 1933.) The Board of Medical Examiners Contingent Fund was drawn upon for \$28,000.

"The Assembly last night gave the death blow to Senator Roy Fellom's Bill (S. B. 674) prohibiting the use of dogs picked up by city poundmasters for experimental purposes. After being amended so that provisions referring to experimental work had been stricken out, the Assembly referred the bill back to the Committee on Public Health and Quarantine. Assemblyman T. A. Maloney, who offered the motion

† The office addresses of the California State Board of Medical Examiners are printed in the roster on advertising page 6.

(Continued on Advertising Page 18, front section)

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